

UNDERGRADUATE BULLETIN

The Undergraduate Bulletin Online is the most current information available about undergraduate programs at University of Wisconsin-Stout. Individual sections of the Undergraduate Bulletin Online will be updated as soon as possible and the revision date noted. Information regarding fees, admission, graduation requirements, names, telephone numbers, and course offerings, is subject to change.

Accreditation

UW-Stout is accredited by the North Central Association of Colleges and Secondary Schools.

The Higher Learning Commission of the North
Central Association of Colleges and Schools
Commission on Institutions of Higher Education
30 North La Salle Street, Suite 2400
Chicago, IL 60602-2504

Phone: 800/621-7740

Individual academic programs may also receive accreditation from other agencies. Learn more on the Provost's Office website.

Minnesota Student Addendum

The University of Wisconsin-Stout is registered as a private institution with the Minnesota Office of Higher Education pursuant to sections 136A.61 to 136A.71. Registration is not an endorsement of the institution. Credits earned at the institution may not transfer to all other institutions.

The University

UW-Stout

UW-Stout is one of 13 publicly supported universities in the University of Wisconsin System. It was founded as a private institution in 1891 by James H. Stout. A Menomonie industrialist and a man of great vision, he saw that students in America's developing industrial society needed a different kind of education, an education broader than that offered by the traditional curriculum. Since its founding, UW-Stout has gained a position of national leadership in its specialized areas. Although UW-Stout is a career-oriented university, the humanities, social and natural sciences are key parts of the total educational program.

UW-Stout's Special Mission

UW-Stout, as a special mission institution, serves a unique role in the UW System. UW-Stout is characterized by a distinctive array of programs leading to professional careers focused on the needs of society. The university offers undergraduate and graduate programs leading to professional careers in industry, commerce, education and human services through the study of technology, applied mathematics and science, art, business, industrial management, human behavior, family and consumer sciences, and manufacturing-related engineering and technologies. These programs are presented through an approach to learning which involves integration of theory, practice and experimentation. Extending UW-Stout's mission into the future requires that instruction, research and public service programs be adapted and modified as the needs of society change.

Learn more about UW-Stout's Mission and Strategic Plan.

Wisconsin's Polytechnic University

University of Wisconsin-Stout is a comprehensive, career-focused polytechnic university where students, faculty and staff use applied learning, scientific theory and research to solve real-world problems, grow the state economy and serve society. Our tenets:

Career Focus: A polytechnic university offers a comprehensive curriculum that prepares graduates for professional careers.

Applied Learning: A polytechnic university blends theory with practice to produce innovative solutions to real world problems.

Collaboration: A polytechnic university works closely with business, industry and other educational institutions to benefit students and grow the economy.

Recognized Quality

In 2001, UW-Stout became the first university in the nation to receive the Malcolm Baldrige National Quality Award, America's highest honor for performance excellence and quality achievement.

The university's mission driven, market smart focus promotes collaborative leadership and an inclusive strategic planning process. Baldrige Award criteria are used by organizations worldwide. Winning organizations become quality advocates, informing thousands about the criteria benefits, including better employee relations, higher productivity and greater customer satisfaction.

The Faculty and Academic Staff

Because UW-Stout has specialized in certain areas, we have developed a staff of individuals nationally recognized in their fields. All classes are taught by the faculty and academic staff

except for a small number of laboratory courses which are taught by highly qualified graduate assistants. With a staff of 493, the student-teacher ratio is about 18:1. The faculty's commitment to provide extra help to students is, one of UW-Stout's proudest traditions.

Students

In terms of enrollment, UW-Stout is not a local or state school. Its 9,286 students come from 45 states and 47 nations. Students have a major voice in the affairs of the university and sit on important university committees. Besides regular and informal meetings with students, the university's chancellor has an "open door policy." Students participate in more than 120 clubs and organizations on campus, including national fraternities and sororities.

Facilities

Modern and well-equipped facilities mark UW-Stout's 131-acre campus. We are proud of our laboratory-intensive programs. More than 240 laboratories are available for study and research in the areas of electronics, power, industrial management, industrial design, industrial graphics, packaging, plastics, graphic communications and telecommunications. Located in the center of the city of Menomonie, adjacent to the downtown business district and Lake Menomin, UW-Stout offers an attractive, convenient and accessible campus setting.

The Community

Located in scenic western Wisconsin, Menomonie has a population of approximately 16,000. The area's natural beauty, with lakes, rivers and hills, provides many year-round recreational and sports opportunities. Major entertainment and cultural activities are available on campus, in the community and in the nearby Minneapolis-St. Paul metropolitan area, about an hour away.

Admission

Information for All Applicants

This section provides general information for degree-seeking students. If you wish to take classes for professional or personal development, you need only read the section titled "Special Students." If you will be taking classes to work toward a degree, you must apply for admission to the university. You can obtain a UW System Application for Admission form by writing the director of Admissions at UW-Stout, contacting any Wisconsin

or Minnesota high school guidance office, or online at www.apply.wisconsin.edu.

UW-Stout accepts applications as early as September 15 for admission to the following fall term. There is no deadline for applications; however, we are limited in the number of students we can accept. Applicants may declare a major on the application form or apply as "undecided."

Keep in mind that you may also have to meet entry standards set by a school or department. See the sections on the individual programs for more information.

UW-Stout will keep you informed of pertinent changes at the university. If you have the chance to study part time elsewhere, you will be able to check the transferability of your course work to UW-Stout by contacting the university's Admissions Office. If transferring from a UW System institution, check online at www.uwsa.edu/tis.

Notice: You must provide the university with accurate information about your personal and educational history. UW-Stout's policy is that students who intentionally

Auditing Classes

If you are not concerned about receiving college credit for courses you take, you may audit classes. Wisconsin residents may audit classes for 30 percent of the normal per credit academic fee. The cost for nonresidents is 50 percent of the normal fee. Senior citizens age 60 or older by the first day of class only pay textbook and lab fees for audit credits and laptops. You may audit classes provided that you apply for admission; the class teacher approves your request to audit the class; you pay any special costs for course instruction other than the normal tuition; and the university will not be required to provide additional classroom or laboratory space for you, and will not realize increased instructional costs.

You will receive only provisional permission to attend classes until course registration is completed. You may not change your admission status and take the course for credit once the class has started. A course which has been audited may not be retaken for credit. You will be subject to Regent, university and student government regulations, just like students who are taking courses for credit. **Note:** As with all students attending the university, special students and auditors must provide UW-Stout with accurate information about their personal and educational history. The university policy is that students who intentionally falsify or omit information given as part of their university record will be suspended.

Admission Categories

Admission procedures and standards vary somewhat from group to group. Following is a definition of each category. Find the category that applies to you (definitions below) and select the appropriate tab at the top of this page:

- **Freshmen:** graduates of high schools in the United States and those who will be graduating, who have not attended another university or technical college or school after high school.
- **Transfer students:** applicants who have attended another university, technical or community college, and wish to transfer to UW-Stout.
- **Re-entry students:** students who have attended UW-Stout in the past and wish to again take classes at the university.
- **Special students:** students (including those still in high school) who wish to further their education, but are not seeking a degree from UW-Stout.
- **Youth Options:** high school students who wish to take university courses under the Youth Options program. Students must apply both through their high school and UW-Stout for permission to enroll.
- **International students:** students from countries other than the United States who wish to attend UW-Stout.

Freshman Students

1. Applications and transcripts may be submitted as early as September for admission the following fall, or early March for the following spring semester. UW-Stout enrollments are limited, so it is important that you plan and apply early. Students applying for the Art–Graphic Design and Art–Interior design programs must submit their complete application materials and portfolio to the Admissions Office by early January (check the website for specific date).
2. You must be a graduate from a recognized high school or equivalent.
3. Academic preparation and success are the primary factors considered for admission to the university. No single factor, attribute or characteristic will be used to determine admission. Admission will be based on multiple criteria including academic and personal achievements. Non-academic qualifications can make a good applicant strong. However, they will not make an academically weak applicant admissible.

4. Applicants must complete the high school course requirements as determined by the University of Wisconsin System.
 - a. four credits of English: including literature, composition, rhetoric and speech.
 - b. three credits of Mathematics: algebra I, geometry and algebra II.
 - c. three credits of Natural Science: biology, chemistry and physics.
 - d. three credits of Social Science/History.
 - e. four credits of Electives: chosen from the areas listed above, foreign language, fine arts, computer science and other academic, career and technical areas.
5. Applicants must earn good grades and maintain a high level of achievement in challenging coursework.
6. The pattern of grades over time is important and an increasingly strong academic record can improve the likelihood of admission.
7. Class rank is requested of all applicants and we consider rank along with other factors.
8. A copy of your ACT score is also required of all applicants to be considered with other factors. We will also accept the SAT.
9. All freshmen must take the ACT or SAT, however, the test is not the only criterion for admission. The admission test requirement may be waived if you have been out of high school for two or more years, are age 21 or older, or are an international student.
10. In addition to academic achievement, the Admissions Office will consider the following as part of the review of an application: leadership, volunteerism, personal statement, honors and awards, letters of recommendation, socio-economic background, extracurricular activities, diversity of personal background, work experience and military experience.
11. New freshmen are likely to be admitted if they rank in the top 50 percent of their graduating class or have earned a minimum ACT composite score of 22 (or SAT equivalent).
12. Some programs, including Applied Mathematics and Computer Science; Applied Science; Game Design and Development; Manufacturing Engineering; and Plastics Engineering are more selective and require stronger academic preparation. The additional criteria for these programs are found online at admissions.uwstout.edu/criteria.

Non-Traditional Admission Requirements

Applicants who have been out of school for two years or more may also be considered for admission if, on the basis of other factors, they appear to have a reasonable probability of success in college. Applicants with a GED or High School Equivalency Diploma may not normally be admitted unless they are a minimum of two years past their expected date of high school graduation. It is recommended that applicants have a GED examination average score of 50 or better to be considered for admission to the university.

Transfer Students

- The university will need an official transcript from each post-secondary institution you have attended. High school transcripts are also required if, at the point of application, the student has not already earned a bachelor's degree. Applications and transcripts may be submitted as early as September for admission the following fall, and early May for the following spring semester. Apply early so you can register for classes and complete the financial aid application process in a timely manner. UW-Stout enrollments are limited, so it's important that you plan and apply early.
- If you have a cumulative grade point average of 2.50 on a 4.0 scale from the last college/university attended, you are likely to be admitted in good standing.
- If you have a cumulative grade point average of 2.2-2.49 on a 4.0 scale from the last college/university attended may be considered for admission.
- If you have fewer than 30 transferable credits and less than a 2.50 cumulative grade point average, you may still be admissible to UW-Stout if you would have been admissible as a new freshman. You may be placed on a wait list and possibly admitted on probation if space is available. You will be notified no later than June 15 for fall admission.
- All students wishing to transfer into a teacher education program must have a 2.75 cumulative grade point average and could be admitted as a Pre-Education student. Subsequent acceptance into a teacher education major and enrollment in professional education coursework will require successful completion of Benchmark I. More information on Benchmark I is available on the School of Education website.
- Credit earned from institutions which are fully accredited, or candidates for accreditation, are fully transferable. Credits from institutions accredited by

a professional accrediting association may transfer in the specialty of accreditation if recommended by the appropriate academic department.

- In determining transferability of all courses, the quality and comparability of the coursework and its applicability to degree requirements will be taken into account.
- Credit may be granted on the basis of recommendations made by various guides to non-collegiate educational experiences published by the American Council on Education's (ACE) Office on Educational Credit and credentials. Examples include military training or corporate training programs.
- Students may have the opportunity to demonstrate competence through the use of internally and externally developed tests, portfolio assessment procedures and other competency based alternatives.

Additional Requirements

Some programs, including Applied Science; Computer Engineering; Dietetics; Game Design and Development; Hotel, Restaurant and Tourism Management; Manufacturing Engineering; Plastics Engineering; and Supply Chain Management applicants have additional requirements which can be found online at the Admissions website or by contacting the Admissions Office at 715-232-1787.

Articulation Agreements

UW-Stout maintains program articulation agreements with various technical and community colleges in Wisconsin and neighboring states. If you are a student enrolled in an A.A.S. or A.S. program and considering a transfer to UW-Stout, call the Admissions Office at 715-232-1787 or check the online guide to Transferring to UW-Stout for the most up-to-date listing of program

Credit for Prior Learning

Students who earn credit through test-out at one institution, and that credit is clearly indicated on the official transcript, will transfer to UW-Stout as it would transfer under normal transfer circumstances. These credits may include:

- **Retroactive Credit** for foreign language
- **Test-Out Credit** for that institution's actual course (as opposed to elective credit)

Credit earned by any means of any other test (Advanced Placement, College Level Examination Program, International Baccalaureate) must provide UW-Stout with an original score report to receive credit pre-determined by departmental review based on score received.

Transfer Credit Principles

The UW System endorses the Joint Statement on the Transfer and Award of Credit developed by the American Association of Collegiate Registrars and Admissions Officers (AACRAO), the American Council on Education (ACE), and the Council for Higher Education Accreditation (CHEA). This document sets forth a number of basic assumptions regarding the transfer of credit between institutions, be they similar or dissimilar, as well as recommended best practices for developing institution-specific policies and procedures. The complete Joint Statement on the Transfer and Award of Credit can be accessed online on the ACE website.

UW System Transfer Students

- UW-Stout works with the UW System two-year colleges and their UW Colleges Guaranteed Transfer Program. If you choose to participate in this program, you are guaranteed admission to UW-Stout, provided you meet the provisions of the policy.
- UW System College counselors can help you select course work that will relate to your planned major at UW-Stout. Under UW System policy, you may transfer up to half the number of credits required for graduation in your major at UW-Stout. Additional credits may be accepted toward your major where appropriate with department approval. This does not alter policies concerning credits to be earned in residence.

Technical and Community College Transfer Students

- If you are transferring from a technical college, UW-Stout credit may be granted in transfer for general education/breadth coursework offered within a Wisconsin technical college applied associate degree or college parallel programs, and similar programs from other states.
- Credit may be granted on a course-by-course basis for occupational and technical coursework if there is not an articulation agreement in place. If you're transferring from such a program, UW-Stout may accept some of your technical credits.

Re-entry Students

There are two types of re-entry students: Regular re-entry students are those who have completed no transferable credits from any post-secondary institution since they last attended UW-Stout. Transfer re-entry students are those who have completed transferable credits at a post-secondary institution since they last attended UW-Stout.

Regular re-entry students:

1. You need to complete the UW System Application for Admission form and return it to the Admissions Office. If you left the university in good standing, you may be readmitted as enrollment management goals allow.
2. If you left on academic probation, you may be readmitted on academic probation, if there is room for you in your chosen program.
3. The director of admissions or a designee will review applications from re-entry students who were academically dismissed from the university. Students currently on academic dismissal must submit a letter of appeal long with their application. If the application for readmission is denied, the decision may be appealed to the Dean of Students Office.

Transfer re-entry students:

1. You must submit official transcripts from each institution you attended since your last attendance at UW-Stout, as well as a completed UW System Application for Admission form. If you left the university in good standing or on probation, you will be readmitted in the same status, provided you are eligible to return to the institution you last attended, and provided enrollment management goals have not been reached.
2. If you left UW-Stout because of academic dismissal, you may be readmitted on probation. Students currently on academic dismissal must submit a letter of appeal long with their application. Decisions will be made on a case by case basis at the discretion of the director of admissions and considering enrollment targets. Students are required to submit a letter of appeal.
3. If your transfer grade point average is less than 2.20, you may be denied re-admittance to UW-Stout. Denial decisions may be appealed to the Dean of Students Office.

Special Students

This diverse group of students may include mid-career professionals seeking certification for a changing technology, community members seeking courses for personal fulfillment, high school students taking classes not offered at a high school, guests and auditors. Special students may be admitted as enrollment management goals permit.

1. To be admitted as a special student, simply indicate that status on the application for admission. You do not need to indicate a major, submit transcripts, take the ACT, or pay the application fee. High school

students admitted as special students must gain the approval of their parents and their high school, and submit a high school transcript.

2. As a special student, you must take the English and math placement tests before enrolling in an English or math course.
3. You are not eligible for financial aid.
4. You may request to change your status to degree-seeking student after you have completed 12 credits. You may accumulate a maximum of 29 credits as a special student.
5. To change to become a degree-seeking student, you will have to complete the application process required of new students by completing the UW System Application for Admission – submitting the appropriate information as New Freshman or Transfer Student as required.
6. High school students who wish to take classes at the university must rank in the top 50 percent of their high school class or have an ACT composite score of 22 or better, or SAT equivalent.

Youth Options Program

The Youth Options program serves high school students who wish to take classes not offered at a high school.

1. To be admitted as a Youth Options student, simply indicate that status on the application for admission. You do not need to indicate a major, take the ACT or SAT or pay the application fee. You must gain the approval of your parents and your high school.
2. You must take the English and math placement tests before enrolling in an English or math course.
3. You are not eligible for financial aid.
4. You must rank in the top 50 percent of your high school class or have an ACT composite score of 22 or better, or SAT equivalent.

International Students

1. All potential international students should have better than average academic records.
2. All applicants must present the university with official copies of their academic record.

First-year students must send certified copies of certificates, diplomas or degrees earned. These

official records must be equal to a United States high school (secondary school) graduation for consideration.

Transfer students must submit certified records of their post-secondary academic work. The records must show the courses the students have taken and the grades they have earned. The university will not grant credit for courses unless there is evidence that the students have satisfactorily completed them.

Credit may be granted to international students if the institution they attended is listed in either the International Handbook of Universities or the Commonwealth Universities Handbook. Credit from institutions not listed in these publications may be transferred only upon the recommendation of the appropriate department.

3. The university will deny admission to students who submit records with any alterations or irregularities.
4. Additional records presented after the student has enrolled will not be considered for transfer.
5. Students from non-English speaking countries are required to take the Test of English as a Foreign Language (TOEFL). Applicants will need a minimum score of 500 (or 173 score on computer-based test) to enroll in full-time study.

For information on taking the TOEFL, write to:

TOEFL Services – Educational Testing
Service
PO Box 6151
Princeton, NJ, USA 08541-6151 USA

The TOEFL will be waived if students have completed an ESL program from an accredited college or university or other program approved by UW-Stout.

6. All international students must show evidence that they have adequate finances to undertake a degree program at UW-Stout.
7. As a condition of admission, international students whose sponsors have a history of delinquency in payment of fees must place on deposit an amount approximately equal to the institution's non-resident tuition and fees for a 12-month period, which includes two semesters and an eight-week summer term. Applicants who must meet this requirement will be notified when the university receives their applications.

8. Questions about this policy may be addressed to the Office of Student Business Services or to the Office of International Education.
-

Scholastic Standards

Student Handbook

The Student Handbook contains helpful information related to academic standards and campus policies, campus programs, rules and regulations, activities, organizations, and services. It is an official document of the university and contains many of the details not found in this bulletin. All students are subject to the rules and standards as they are presented in the handbook.

Semester Credit

UW-Stout expresses credit in semester hours. One credit represents the satisfactory completion of the work of one meeting a week for a period of one semester. A course having five meetings a week will usually give five semester hours of credit. In order to receive a degree, you must not only gain the required number of credits in the program you are pursuing, but also must attain a certain standard of scholarship. (See also "Suspension and Probation.")

Credit by Examination

You may be able to receive credit by demonstrating your competence through examination. External examinations include the College Level Examination Program (CLEP) and the Proficiency Examination Program (PEP). For further information on external examinations, contact the Counseling Center.

You may also receive credit through the "test out" procedures developed by various university academic departments. For more information, contact the appropriate school or department office.

If you test out of a course, you will be charged a testing fee.

Credit Registration and Overload Policy

A normal semester credit load is 16 or 17 credits. Register only for those classes you intend to complete. Do not register for classes which conflict with other class(es).

Undergraduate students, with the exception of graduating seniors, will be restricted to 18 credits during the early registration. Once registration is completed, students may add credits up to a maximum of 20 during the add/drop period. A fee will be charged for any credits beyond 18.

You may seek a waiver of the 20-credit limit by appealing to your program director. If the program director approves an overload permit, you must file it in the Registration and Records Office.

During summer session, you may enroll for a maximum of one credit per week. Again, if you want to seek a waiver to the credit limit, contact your program director.

Retroactive Credit for Foreign Language

Students who earn a grade of "B" (3.0) or better in foreign language courses would also receive credit for the lower level foreign language course or courses associated with that course.

Math and English Placement

Remedial Placement Students who are not transferring credits in math or English must take the regional math and English placement tests. These are given around the state during the spring semester. Make-up tests are given in the summer at announced times. Students who place into remedial math or English must successfully complete the course by the end of 30 credits or they will not be permitted to register.

English Placement Students who perform well on the placement tests may be placed in an advanced English class (ENGL-111 Freshman English – Honors).

Advanced Placement UW-Stout grants credit for scores of three or greater on the College Board Advanced Placement test. In addition, students can receive credit for a specific course. For more information about advanced placement examinations, call the Office of Admissions at 715/232-1411.

Add/Drop Policy

Even with careful planning, you may find you have to add or drop a class after the semester begins. To comply with accreditation and financial aid regulations, UW-Stout has a published add/drop policy.

The following serves as UW-Stout's procedures for adding or dropping classes within the guidelines of the policy:

Students are expected to complete courses for which they register. Students who wish to adjust their class schedules may add or drop classes before the end of the second week of semester classes and before the end of the first week of quarter classes. Drops made during the first two weeks of a semester course or the first week of a quarter course will not appear on a student's transcript. If students deem it necessary to reduce their program after the normal (two week) add/drop period, they should do so as early as possible. A mark of "WS" or "WU" is given by the instructor and recorded on the student transcript for a course dropped after the add-period of a semester or quarter course but before the midterm date. After the midterm date, any withdrawal from a course is recorded as an "F." If extenuating circumstances warrant other consideration, an appeal may be made to the instructor of the course. Students who register for a course but do not attend the class and do not officially

withdraw are given a mark of "F." Students who do not attend the first class meeting of a course, or who do not notify the instructor or department chairperson that they will be absent for special reasons, may at the instructor's option, be dropped from the course if, and only if, other students are waiting to enroll at that time. Students should consult the current term "timetable" for the official drop dates.

Grade Point and Symbols

Grade	Grade Points
A	= 4.00
A-	= 3.67
B+	= 3.33
B	= 3.00
B-	= 2.67
C+	= 2.33
C	= 2.00
C-	= 1.67
D+	= 1.33
D	= 1.00
D-	= 0.67
F	= 0.00
O	= Outstanding (no grade points)
S	= Satisfactory (no grade points)
U	= Unsatisfactory (no grade points)
W	= Withdrawal from school before midterm or grade assigned
I	= Incomplete
CR	= Credit (no grade points)
F	= Fail
IP	= In Progress (approved courses only)
AU	= Audit - no credit awarded
NC	= No Credit
WS	= Withdrawal - Satisfactory Work
WU	= Withdrawal - Unsatisfactory Work

Accommodating Religious Beliefs

UW-Stout honors individuals' religious beliefs. If scheduling of tests or other mandatory activities interferes with students' religious observances, students may request alternative arrangements.

Within the first three weeks of class, students must notify their instructors if there will be days or dates when their religious activities will prevent them from participating in academic events. For summer sessions or short courses, students must notify their instructors within the first week of class.

The university accepts, at face value, the sincerity of students' religious beliefs. Information students provide about their religion will be kept confidential.

Once instructors know of students' needs, they will be able to schedule make-up examinations or other course

requirements, before or after the regularly scheduled examination or other requirement.

If students believe their religious beliefs have not been accommodated, they may file a grievance. For more information about the policy or the grievance procedure, contact the Dean of Students Office at extension 1181.

Procedure for Withdrawal from UW-Stout

Withdrawal should be undertaken only after serious consideration. If you intend to withdraw from the university, you must contact the Registration and Records Office and complete a withdrawal form. If you fail to withdraw officially from the university, you will receive a grade of "F" in all your courses. Withdrawals after the midpoint of a term or course will generally result in "F" grades. (See the grading policy on the Registration and Records website.)

Suspension and Probation

Grade point requirements for graduation vary by major. Minimum acceptable standards for retention are defined as follows:

1. First semester freshmen students will be placed on probation if they achieve a grade point average less than 1.8 at the end of the semester. They will be suspended if their grade point average is less than 1.0 for the semester.
2. Second semester freshmen will be placed on academic probation if their cumulative grade point average at the end of the semester is less than 1.9. They will be suspended if their grade point average is less than 1.0 for the semester.
3. Second semester sophomores or upper division students will be placed on academic probation if their cumulative grade point average at the end of the semester is less than 2.0. They will be suspended if their grade point average is less than 1.0 for the semester.
4. Students with two consecutive terms of probationary-level work will be dismissed unless they have a semester grade point average of 2.5 or better.
5. A student who has been declared academically ineligible to continue may request a hearing to appeal.

Requirements for Graduation

The semester credit hours required for graduation are stated under the program of study for each major. You are

responsible for knowing and meeting the requirements for graduation. To fill the minimum residence requirement, you must earn 32 semester hours of credit (64 grade points) in residence at UW-Stout. One semester before graduation, you must file an Application for Degree card with the Registration and Records Office.

Graduating with Honors

Undergraduate honors are based upon scholarship. The following designations are used:

Cum Laude » 3.5 – 3.699 grade point average

Magna Cum Laude » 3.7 – 3.899 grade point average

Summa Cum Laude » 3.9 – 4.00 grade point average

A minimum cumulative grade point average of 3.5 must have been earned in all credits from all institutions attended. For commencement purposes, the cumulative grade point average earned at the end of the semester preceding the commencement ceremony will determine recognition at the commencement ceremony. However, honors will be officially determined when all coursework has been completed. Honors will be listed in the student's transcript and will appear on the diploma.

Chancellor's Award

The Chancellor's Award recognizes undergraduate students who receive a semester grade point average of 3.5 or greater on 12 or more credits. A special Four Star Recognition Award will be given to undergraduate students who attain a 4.0 average.

Financial Information

Fee Payment

You are expected to pay all fees according to the procedure outlined in the Student Handbook. Failure to pay fees may result in suspension. UW-Stout offers an opportunity to pay fees in installments. This program requires a down payment plus any past due amount or total payment at registration, whichever is less. The balance is due in additional monthly installments.

All students are required to have a signed University of Wisconsin-Stout Payment Plan Agreement/Application on file with the Office of Student Business Services. All Wisconsin residents are also required to provide information on their marital status.

The application form is online at www.uwstout.edu/stubus/payplanagree.cfm or can be picked up at 125 Administration Building.

Semester Costs

Undergraduate fees are set by the University of Wisconsin Board of Regents and are subject to change. These fees incorporate the usual student costs such as textbook rental, Student Center, student activity, technology, United Council, and health fees. However, the schedule does not include lab or material fees charged in some courses. Students in the eStout program pay a per credit rate for tuition. All tuition and fees, room and food rates, and other charges are subject to change without notice. Tuition and fee information is online at the Student Business Services website.

Minnesota Students

If you are a Minnesota resident and a new student at UW-Stout, you must submit a reciprocity application to Minnesota. Approval takes up to four weeks. If approved for reciprocity, you will be charged at the Minnesota resident tuition rate. The State of Minnesota has indicated that "reciprocity benefits will not be granted retroactively" and that "each student is responsible for the application process." Therefore, each new student must submit a correct application before the last day of the semester. Apply early to avoid complications. Students that have been in attendance at UW-Stout and have earned credits during the previous academic year will automatically have reciprocity renewed by the State of Minnesota. Reciprocity applications are available online at www.mheso.state.mn.us.

Students Auditing Classes

Wisconsin residents may audit classes for 30 percent of the normal per credit academic fee. The cost for non-residents is 50 percent of the normal non-resident fee. Senior citizens age 60 or older by the first day of class only pay textbook and lab fees for audit credits.

Refund on Fees

Withdrawal from semester courses generates refunds based on the following schedule: first and second week of classes, 100 percent third and fourth week, 50 percent. After the fourth week, no refunds will be made. Refunds for room and food service charges are based on the date of withdrawal.

Graduation Fee

Upon application for graduation, candidates will be required to pay a non-refundable, graduation application fee of \$50. This fee pays for the application processing, final degree audit, diploma, diploma cover, as well as other costs and accessories associated with the commencement exercises. Candidates will be assessed this fee regardless of commencement ceremony participation. The fee does not

cover the cost of the cap and gown, which are available from the University Bookstore.

Unpaid Obligations

Failure to meet financial obligations is a serious matter. Therefore, if you owe money to the university and fail to meet that obligation, UW-Stout may suspend you. A hold will be placed on your account and you will not be allowed to register or receive transcripts until your delinquent accounts are brought up-to-date. This includes such items as library fines, assessments for damages in laboratories and residence halls, as well as tuition and fees. Collection costs will be assessed on any unpaid charges owed to the university.

Financial Aid

The Financial Aid Office provides resources to UW-Stout Students and their families who need assistance in paying for college costs. This assistance is in the form of grants, work programs and/or student loans.

The philosophy for all need-based financial aid programs is that students and their families are primarily responsible for financing their education. Families applying for financial aid need to submit a Free Application for Federal Student Aid (FAFSA), a “financial statement” listing their income, assets and liabilities. Established federal and state formulas are used to determine a reasonable contribution from the student and family. State and federal financial aid is intended to meet education costs above that reasonable contribution.

The Free Application for Federal Student Aid (FAFSA) must be applied for annually. The FAFSA is available online at www.fafsa.ed.gov. If you apply electronically, the student and parents may use a pin to electronically sign the FAFSA. A PIN is easily obtained online at www.pin.ed.gov. The Financial Aid Office recommends the FAFSA online, as it is easy to use and shortens application processing time. A paper version of the FAFSA is also available at high schools, any post-secondary financial aid office or Stout will mail one to the family if requested.

The FAFSA may be submitted on or after January 1 of the academic year of enrollment. UW-Stout’s recommended priority filing date is March 15 for a fall start date to ensure all aid programs are available.

UW-Stout’s Federal School Code Number is 003915. This number is required on the FAFSA if the results are designated for Stout. When the results of the FAFSA are received by Stout, the student and family may be asked for further information or clarification. Once the application process is complete, the student will receive an award letter to accept or decline the aid offered.

Financial aid is awarded based on need, enrollment status and aid program availability. Students must be enrolled in a degree program at UW-Stout and maintain satisfactory academic progress.

All available federal and state financial aid, except earnings from work study, will be credited directly to student accounts at the beginning of each semester. All university charges will be deducted from aid funds prior to any refund to the student. Refunds will be automatically sent to the student’s university identification card account or designated bank. Paper refund checks may be mailed to students if this method is preferred.

Additional information on available resources including scholarships, alternative loans and other aid is available online.

All financial aid awarded maybe subject to change because of levels of state or federal funding or receipt of aid at prior post-secondary institutions or any new information including receipt of aid resources such as scholarships.

The Financial Aid Office has more complete information about the topics mentioned here on their website.

Withdrawal Fee

You will be charged a fee of \$50 for a first-week withdrawal, and \$100 for any withdrawal during the second week.

Financial Aid Replacement and Refund Policy

Students on financial aid will not receive refunds until funds representing financial aid awards have been applied back to the respective financial aid programs. Be sure to check with Student Business Services to verify the impact of withdrawing and your responsibility for repayment of financial aid.

Undergraduate Scholarships

Merit-Based Freshman Scholarships

More than \$35,000 is awarded annually to outstanding high school seniors through merit based freshman scholarships. All entering freshmen are considered for these scholarships. Selection is based solely on academic merit without regard for financial need. Recipients are notified shortly after acceptance to UW-Stout.

Scholarship: Wisconsin Academic Excellence Scholarship

Award: \$2,250

Criteria: Selected by high school

Scholarship: National Merit Finalist

Award: \$2,000

Criteria: Automatically awarded to NMSQT Finalist

Scholarship: National Merit Semifinalist

Award: \$1,000

Criteria: Automatically awarded to NMSQT Semifinalist

Scholarship: Chancellor's Academic Honor Scholarship

Award: \$1,000

Criteria: Automatically awarded to those with top 5 percent class rank, an ACT score of at least 25, or an SAT score of at least 1140.

Merit-based scholarships are not cumulative. Students who qualify for more than one scholarship will be awarded the scholarship of highest value.

Stout University Foundation Scholarships

The Stout University Foundation awards approximately \$600,000 in scholarships for undergraduate and graduate students at UW-Stout. These scholarships are financed by the contributions of alumni, friends, parents, faculty, campus organizations, other UW-Stout staff, foundations and corporations. No single factor will be responsible for an applicant receiving a scholarship. Factors which are considered include academic performance, teacher evaluation and comments, professional activities, extracurricular activities, community involvement, written statements, neatness and care in completing the application, and, in some cases, financial need.

The scholarship application form and deadlines are available online at www.uwstout.edu/foundation. Completed application forms must be submitted to the Stout University Foundation.

The Scholarship Committee reviews applications and makes awards in the spring. Recipients are notified by May 1. Recipients are required to write a letter of appreciation to the scholarship donors before payment is made for tuition. A formal award ceremony honors scholarship winners, donors, friends and family in September.

For additional information about scholarships, contact the Stout University Foundation, Louis Smith Tainter House, 715/232-1151.

Other Scholarship Opportunities

By investing a little time and energy, you can conduct your own scholarship search. Scholarships are often provided by community agencies, corporations, clubs, cultural groups, foundations, churches and civic groups. While many are not based on financial need, you will usually have to meet some criteria to qualify for funding, such as academic achievement, community activities, leadership, ethnic or racial heritage, athletic ability, or other guidelines.

High school guidance counselors can supply a list of some of the scholarships available in your region. Reference librarians may also be able to help you identify sources. But there are other possible sources of funding for your education:

- Find out if your parents' employers, professional organizations or labor unions offer scholarships.
- Contact regional civic organizations and ask about scholarships. The Chamber of Commerce, Rotary Club, Lions Club or other groups may have scholarship funds available.
- Review library resources that list financial aid sources.
- Contact groups in your community, including churches, veterans, industries and major businesses.
- Check with your program director or the dean's office for the school your degree program is housed in for private scholarship information.
- Contact the national office of your student professional organization for scholarship opportunities.
- Not all scholarships are for large amounts of money, but any scholarship can help offset the cost of an education.

Services for Students

Athletics

The intercollegiate athletic program emphasizes educational values for the participants and provides a laboratory for students in the coaching certification program. UW-Stout is a member of the Wisconsin Intercollegiate Athletic Conference (WIAC) and is affiliated with the National Collegiate Athletic Association-Division III. The university sponsors nine women's and seven men's varsity teams. Women's teams include basketball, cross country, golf, gymnastics, soccer, softball, tennis, track and field, and volleyball. Men's teams are baseball, basketball, cross country, football, golf, hockey, and track and field. More information is available at UW-Stout Athletics website.

International Student Services

The special needs of international students are met through professional and referral services provided by the Office of International Education. These services include confidential personal counseling on immigration matters, financial problems, academic questions, social customs and personal concerns. Other services which promote cross-cultural understanding include new student orientation, International Relations Club activities, international week, and liaison activities in the university and Menomonie area community.

More information available on the International Student Services website.

University Library

The University Library has a collection of more than a million items, including online full-text resources, audiovisual materials, periodicals, and books. Access is available to more than 35 million items through universal borrowing from other UW libraries.

The library provides wireless and Ethernet connections for laptop users and has specialized equipment for printing, scanning, and e-portfolio work. A variety of equipment is also available for checkout including laptop computers, multimedia projectors and digital cameras. More than 100 desktop computers are on hand in the Library. The library provides an inviting atmosphere for study and contemplation. A food cart is available in the lobby during the academic year. Lounge furniture, quiet study spaces and group study rooms are available throughout the library. The library is open 90.5 hours per week with adjusted open hours in the summer and at times when no classes are offered. Customer service oriented Library Staff is available to assist users in their quest for information. More information is available on the University Library website.

Off-Campus Housing

The Stout Student Association provides information about available off-campus housing at <http://ssa.uwstout.edu/housing.html>. Advertisements for off-campus housing may be found in The Stoutonia as well. If you plan to live off campus, you may find it useful to visit Menomonie to secure the type of housing you desire.

Residence Halls

Residence hall living is a meaningful part of your life at UW-Stout. With the help of a professionally trained staff, students achieve their goals through a variety of social, educational and recreational activities. Approximately 2,700 students live on campus. UW System policy requires freshmen and sophomores (60 credits or fewer who are not veterans, married or living with parents or guardian) to live in university residence halls. This policy is strictly enforced. Residence hall information will be sent you shortly after being admitted. We require a \$125 prepayment with each lease/contract. The lease/contract is valid for the entire academic year.

UW-Stout offers a First Year Experience program where all freshmen live together in the South campus residence halls. Upperclass students live primarily on North campus, including the suite-style Red Cedar Hall. Each suite consists of four bedrooms, a bathroom, and a living area and kitchenette. The building is fully air conditioned and has two elevators.

Each room is carpeted and furnished with a microwave oven, refrigerator, two single beds, dressers, bookcases, desks and chairs. Network access is available in all rooms. Cable TV is provided as well as local phone service — you must provide your own phone. Basements provide access to computers laboratories (with printers and scanners), laundry rooms, television areas, kitchens, study areas, game rooms and exercise rooms. The reception desks offer many services and a variety of equipment including tools, vacuum cleaners; cooking equipment, DVDs, and sports equipment.

More information, including current rates is available at the University Housing website. Additional questions may be directed to the University Housing office at 715/232-1121, or by e-mail at housing@uwstout.edu.

Students who live on campus during the academic year choose a dining service plan from a variety of options. For more information, go to University Dining Services.

Learning and Information Technology Services

Learning and Information Technology (LIT) is a support organization dedicated to providing efficient and effective state-of-the-art learning and information technology solutions and services to students, faculty, and staff for instruction, administration, and public service in support of the University's mission. Learn more about services available to students at the Learning and Information Technology Services website.

Student Services

Student Services is a network of programs that provide services designed to meet student needs in academic success, career development and personal skill building. Contact the Office of the Dean of Students at 130 Bowman Hall or call 715/232-1181 for more information about any of these programs.

Advisement Center

The Advisement Center is home to UW-Stout's First-Year Advisers and the following services: first-year advising, career exploration, change of major, exit interviews, new student orientation and registration, academic skills program, and the Youth Options Program.

In addition, the Advisement Center serves the undergraduate student population as a drop-in center for general academic assistance and career information. The center is open from 8:00 a.m. to 4:30 p.m., Monday through Friday. Appointments are appreciated, however walk-ins are welcome. For more information, call 715/232-1465, or visit 11 Bowman Hall, or go to the Advisement Center website.

- **First-Year Advising** As part of UW-Stout's extended orientation for new students; first-year students are assigned an adviser who will work closely with them throughout their first year at the university. This

adviser provides guidance in academic, career and transition issues that typically occur during the first year of college. Freshmen will meet with their first-year advisers multiple times during the school year; receive timely e-mails reminding them of important dates for adding/dropping classes, fee payments, Advisement Day, and Evaluation Week and learn about campus resources and policies. Freshmen transition to their academic program adviser at spring semester's Advisement Day.

- **Career Exploration Services** offers a collection of computerized and printed information on jobs, career outlook data, college catalogs and graduate school information. Students may take interest and personality assessments and review them with a counselor to assist in deciding career direction and goals. For more information, call 715/232-5306 or go to the Career Exploration Services website.
- **New Student Orientation/Registration** aids students in their transition to the university and initial course registration. Programming includes advisement, course registration, academic expectations and an introduction to university resources, services, social and cultural opportunities. Parents are welcome and encouraged to attend parts of the registration/orientation programs. Each classification of new students (first time freshmen, transfer student, and Youth Options participant) has different programming options, dates and requirements. For more information, call 715/232-1465 or visit 11 Bowman Hall or go to the New Student Orientation/Registration website.

Career Services

Career Services offers a variety of career search services to students and alumni. Counselors can help you plan for future employment opportunities. Services include online registration, career conferences, campus recruitment, teacher fairs, workshops and one-on-one counseling. Employment assistance to graduates and co-ops are a major emphasis at UW-Stout. The office maintains statistical reports on the employment of graduates and cooperative education employment activities.

More information is available from the Career Services Office, 103 Administration Building, 715/232-1601 or on the Career Services website.

The Counseling Center

The Counseling Center offers counseling (for individuals, couples and groups), educational programs and workshops, self-help resources, and consultation to the campus community — with a mission of contributing to the intellectual, emotional and relational health and

development of students. All counseling records are kept strictly confidential and are not part of university records. For more information, stop by our office in 410 Bowman Hall, call us at 715/232-2468, or visit the Counseling Center website.

- **Testing Services** Psychological and educational testing services are also offered by the center, including mental health screening inventories, personality tests, UW placement tests, Praxis tests, CLEP exams, the Miller Analogies Test and technology certification exams. Learn more online at the Testing Services website.
- **Alcohol and Other Drug Education Program (AODEP)** As part of the Counseling Center, the AODEP helps people develop mature, responsible and legal alcohol and other drug behaviors and attitudes. The AODEP provides a variety of services related to alcohol and other drug prevention, intervention, assessment and counseling. Learn more online at the Alcohol Enforcement and Education website.
- **Campus Violence Prevention Project (CVPP)** This project provides education and outreach on safe and healthy relationships, signs of abuse, and assists peers in helping someone they are concerned about. Advocacy services are available to men or women who experience dating violence, sexual assault, or stalking. Learn more online at the Campus Violence Prevention Project website.

Dean of Students Office

Students who have questions about academic policies, behavior of other students and university conduct policies, student rights and responsibilities, support services, and adjusting to life at UW-Stout are invited to bring their questions and concerns to the Dean of Students Office. This office serves an ombudsman role, assisting students to find solutions to their concerns and to implement them. Appeals of academic dismissal and course drops, requests for exceptional withdrawals and reports of extended absences should be initiated in this office, as well. Parents, staff and faculty, and members of the public are invited to contact this office for information on campus policies, and to report student issues or incidents they feel should be brought to the attention of the campus. For more information visit 130 Bowman Hall or online at Dean of Students Office website.

Disability Services

Students who require assistance due to a disability should contact the Disability Services Office in a timely manner to assure that appropriate support and accommodations will be provided. Current documentation of your disability and of needed accommodations must be provided to be eligible for services.

Potential services offered include, but are not limited to, one-to-one academic monitoring, alternative testing, note taking assistance, arrangement for audio books, scheduling and priority registration assistance, sign language interpreter for classes, writing assistance, disability parking, and request for accessible on-campus housing. Staff members assist students in building self-advocacy skills with faculty and other staff, and provide referrals to appropriate campus and community resources. For more information, call 715/232-2995, visit 206 Bowman Hall or go to the Disability Services website.

Educational Talent Search

Educational Talent Search is a federally funded TRIO program. The program serves young people in grades 6-12, who may be from first generation and/or low-income families, to finish high school, enter post-secondary education and successfully graduate. In addition to counseling, participants receive information about college admission requirements, scholarships and various student financial aid programs. This early intervention program helps young people to better understand their educational opportunities and options. For more information, call 715/232-5010 or visit 13 Harvey Hall or go to the Educational Talent Search website.

Multicultural Student Services

Multicultural Student Services provides programming and support to African-American, Native American, Latino and Southeast Asian students. The staff provides academic and personal advising and support, and information and assistance with scholarships. Several cultural organizations are available for multicultural and other interested students. Multicultural Student Services also functions as a multicultural resource across campus. For more information, call 715/232-1381, visit 217 Bowman Hall or visit the Multicultural Student Services website.

Student Support Services — ASPIRE

ASPIRE is a federally funded TRIO academic support program that encourages college students to stay in school and graduate. Services are targeted toward first generation college students, limited income students, or students having a physical or learning disability.

ASPIRE programming provides courses, career and personal development activities for eligible students. The staff helps students monitor their academic progress and provide academic counseling and other services to help students achieve their academic and college goals.

For more information, call 715/232-2995, visit 206 Bowman Hall or go to the ASPIRE website.

Upward Bound

Upward Bound is a federally funded program designed to help students develop skills and motivation required to succeed in education both in high school and beyond.

Upward Bound assists students through academic advising, tutoring, admissions and financial aid activities, college visits, cultural and career activities, counseling and mentoring programs. Fifty students are involved in four Dunn county schools. Students served are 9-12th graders. Selected students take part in weekly tutoring, weekend meetings and an intensive six week summer program at UW-Stout.

For more information, call 715/232-3596 or visit 310 Bowman Hall.

Student Health Services

All registered UW-Stout students are eligible to receive care at the Student Health Services. The majority of the services are funded by the student health fee, which is included in the tuition and fee payment. Services offered are diagnosis and treatment of illnesses and injuries; diagnosis, medical treatment and collaborative care with counseling professionals for common mental health concerns; general, employment, travel and athletic physicals; preventative health screening; diagnosis and treatment for sexually transmitted infections; confidential HIV testing; laboratory testing; on site availability of common prescription medication and orthopedic supplies; immunizations/vaccines; tuberculin skin testing; and health education. Services are available during the academic year from 7:45 a.m. to 4:30 p.m., and during the WinTerM session from noon to 4:30 p.m., Monday–Friday. During the summer months, the clinic is closed; however, a health advice line, staffed by medical care personnel, is available.

If urgent care is needed during the hours that Student Health Services is closed, contact Red Cedar Medical Center at 715/235-9671 or Marshfield Clinic at 715/233-6400. All costs are the responsibility of the student.

Additional information about services, health insurance and other topics is available at the Student Health Services website.

Textbooks

Textbooks and other required resources for your classes are available for loan at this service. Instructional Resources Service (IRS) is located on the west side, second floor, of the Robert S. Swanson Learning Center. Required resources may be checked out and are due the last day of the class. Resources are also available for purchase.

If you have any questions or need assistance, feel free to stop in or call 715/232-2492. Additional information is available at the University Library website.

University Centers

University Centers are welcoming gathering places that encourage involvement, interaction and learning. Since you'll

spend three quarters of your time outside of the classroom, extracurricular and co-curricular activities that contribute to intellectual, professional and personal growth can be a valuable partner to academics.

Memorial Student Center is a community center for members of the UW-Stout community — students, faculty, staff, administration, alumni and guests. It is a place to get to know and understand and appreciate one another. Join an organization to plan events for the campus or become a student staff member and gain work experience and knowledge. Our staff helps to make your experience a memorable one.

Memorial Student Center

The Memorial Student Center is here for you to “Live, Learn, Lead!” As the campus “community center,” the Memorial Student Center is a welcoming gathering place for students, faculty, staff administration, alumni and guest to gather, study, dine, play and relax. It is a place to get to know and understand one another. Our staff is dedicated to making your out of classroom experience a valuable part of your education.

The Memorial Student Center includes staffed and self-service dining areas, a service, copy and information center, billiards and bowling, the University Bookstore, conference/reservations office and plenty of hang out space. The hallways proudly display UW-Stout student artwork and flags representing the home countries of our international students. Involvement and Leadership office provides service learning, programming and leadership opportunities and is located on the lower level. Students gain valuable professional experience by working jobs offered year round.

We are conveniently located at 302 10th Avenue, a major crossroad of the campus. You are invited and encouraged to use the facility, services, programs and activities offered by the Memorial Student Center. For more information about our services, call 715-232-1431 or visit the Memorial Student Center website.

The Involvement and Leadership Center

The Involvement and Leadership Center, located in the Memorial Student Center, fosters a supportive environment that encourages and challenges students to become fully engaged in and enjoy campus life, to seek learning outside of the classroom and to prepare themselves as contributing citizens.

- **Student Organizations** You may choose from approximately 120 student organizations and a myriad of activities on campus, in areas as diverse as music, service, journalism, religion and politics. Student organizations help students continually develop their skills interests. A list of student organizations is online at studentorgs.uwstout.edu.

- **Involvement and Leadership** provides significant learning experiences for students through meaningful service and leadership activities that benefit our community. Learn more online at www.uwstout.edu/campuslife/getinvolved.

University Recreation is a great way for you to stay active, develop friendships and learn lifetime skills while attending UW-Stout. If you are into playing sports, rock climbing, strength training, kayaking and cardio classes, then look no further — University Recreation has it all.

You can be active in the following programs:

- **Intramural Sports** will let you exercise your competitive spirit. Join a team or create your own and challenge the rest of the university in the sport you love most. Organized leagues with tournament play and officiating allows for an exciting athletic environment.
- The **Health and Fitness Center** offers a state-of-the-art facility along with group fitness classes taught by instructors. If you need a little motivation or guidance, our knowledgeable staff of personal trainers is always available to help out. A 25-meter swimming pool is available for recreational use. This is a chance to achieve peak physical fitness.
- **Stout Adventures** will take you to the backcountry, up high on a rock face, or down a scenic waterway. Discover your sense of adventure and explore the wilderness around you. Those who enjoy climbing can take advantage of two 30-foot indoor climbing walls. Memberships are available to all students. Stout Adventures also facilitates an outdoor Adventure Challenge Course which consists of two 50-foot towers and nine low initiatives designed to challenge groups or individuals.
- **Sport Clubs** are another great way to show your competitive spirit, with up to 26 clubs to choose from. These sport clubs have been formed by individuals who are motivated by a common interest and desire to participate in a recreational activity. Many clubs compete regionally and nationally.

If you are looking for student employment, University Recreation employs 120 students yearly from intramural sports officials and lifeguards, to group fitness instructors, and adventure challenge course facilitators. Learn more at the University Recreation website or call 715/232-1392.

Veterans Services

The Registration and Records Office provides assistance to veterans. This office provides veteran students with current information on veteran's affairs, coordinates special educational programs for veterans, and maintains liaison with

the Veterans Administration, Department of Veterans Affairs and the County Veterans Service Officers. All veterans receiving assistance must file the appropriate forms with this office to be officially certified to receive benefits.

For more information, visit Veterans Services, 109 Bowman Hall, 715/232-1233 or veteranstudents@uwstout.edu.

Teacher Education

Teacher preparation programs are housed in the School of Education. Students can prepare to become teachers in technical or community college settings or in PK-12 school settings. The School of Education is accredited by the Wisconsin Department of Public Instruction. The School of Education serves as a resource center for students, schools, and the general public. The dean of the School serves as the certification officer at the University of Wisconsin-Stout.

Information about the School of Education and specific teacher education programs, minors, and other subprograms can be found online at the School of Education website or by calling 715/232-1088.

Pre-education is the initial designation for students interested in becoming a licensed teacher in a PK-12 educational setting. The UW-Stout School of Education Assessment System is designed so that candidate progress is reviewed at various points called benchmarks. The benchmark level reviews include:

- Benchmark I: Acceptance into PK-12 Teacher Education Program;
- Benchmark II: Admission to Student Teaching;
- Benchmark III: Program Completion.

Certification

Licensing agencies make periodic changes in requirements that may necessitate program changes. It is the student's responsibility to make certain they have the most current information from their program director or faculty advisor. Certification requirements vary by state. Students contemplating teaching certifications in another state may wish to clarify the acceptance of their program at UW-Stout with the state in which they plan to teach.

Glossary of Academic Terms

Academic Probation

A condition of attendance under which students are allowed to remain at the university with the understanding that they meet set academic standards within a set period of time. Failure to meet the standard results in dismissal from the university.

Add and Drop

The process of changing a course schedule by dropping or adding a course during the prescribed time at the beginning of each semester.

Adviser

Faculty or staff member who can provide information and assistance on academic concerns.

Audit

Students register and attend class, but do not take examinations. No credit hours are earned, and the cost of the class is less than regular tuition. "AU" will appear on the grade record.

Bachelor's Degree

The degree received after completing a specific program of undergraduate study and fulfilling all graduation requirements.

Certification

A recognition of professional achievement bestowed by an outside organization.

Class Standing

A measurement of achievement based on the number of credit hours earned. Students with 90 or more credits are seniors. Juniors have 60 or more credits, and sophomores have at least 30 credits.

College

An administrative division of the university housing academic departments, degree programs and other administrative units. At UW-Stout these are: Arts, Humanities and Social Sciences; Education, Health and Human Sciences; Management; and Science, Technology, Engineering, and Mathematics.

College Parallel Program

A program of study offered at Wisconsin Technical Colleges and UW System Colleges in which the courses meet the requirements and standards of courses offered at the university.

Concentration

A component within a degree program that examines a selected area of the student's chosen professional field in greater detail. A concentration may be part of the university's planned offerings or designed by the student.

Cooperative Education

A learning approach that integrates college studies with working experiences in industry, business, government and public service. Under the plan, students leave campus for three to six months for the rigors and responsibilities of actual employment situations. The objective is to offer an additional option for learning and to give students a realistic education.

Credit Hour

UW-Stout defines a credit hour as an amount of work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates: [1] At least one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester hour of credit, or the equivalent amount of work over a different amount of time; or [2] At least an equivalent amount of work as required in part one [1] of this definition for other academic activities as established by UW-Stout, including distance education, online, hybrid, or other indirect faculty instruction, laboratory work, internships, co-op experiences, studio work, and other academic work leading to the award of credit hours.

Credit Load

The number of credits a student registers for during a semester.

Degree Audit

A report that indicates the students' progress in meeting all of the requirements for a specific degree program.

Degree Program

A planned program of study leading to a bachelor's degree.

Degree-Seeking Student

A student who has been admitted to a degree program and is seeking a bachelor's or master's degree.

Disadvantaged

Deprived of basic social rights and security through poverty, discrimination, or other unfavorable circumstances.

Educationally Disadvantaged

Deprived of a socially adequate education through poverty, discrimination, or other unfavorable circumstances.

Elective

A course taken at the choice of the student. If the electives are in the general education component of a degree program, they must be general education courses.

Emphasis

A designated group of courses within a degree program that affords increased exposure to a specific area in the student's chosen professional field.

Full Time Student

An undergraduate student who enrolls for at least 12 credits during the fall or spring semester, or one credit per week of study during the summer session.

General Education Program

The General Education Program provides the core of what it means to be a well-educated university graduate. The goal is to promote human excellence through a broad foundation of skills and knowledge required to realize a meaningful personal, professional, and civic life. The General Education Program is intended to enable students to contribute to and live responsibly in a diverse, interconnected, and technologically sophisticated global community.

In accordance with the General Education Program, general education courses should be accessible to a broad audience and should further the goal of providing a well-rounded education regardless of career aspirations or program of study.

Good Standing

Maintaining an academic record that meets UW-Stout's requirements; eligible to continue at or return to the university, or to transfer to another institution.

Grade Point

The numerical value given to letter grades, based on an "A" receiving four points, a "B" three points, and so on.

Grade Point Average (GPA)

The numerical value assigned to a student's scholastic average, computed by dividing the total grade points by the total credit hours attempted.

Grant

Financial assistance that does not have to be repaid.

Hold

A barrier placed on a student's ability to register for classes as a result of unpaid monetary obligation or other action by the university.

Incomplete

The grade assigned only if a student is temporarily unable to complete course requirements because of unusual circumstances.

Independent Study

A course of study designed by a student and undertaken outside the classroom, under the supervision of one or more faculty.

Interdisciplinary

Drawing on two or more disciplines in a single course or program.

Internship

Work in a company or agency related to a student's degree program and career plans, usually for academic credit and often also for payment.

Major

A planned program of study leading to a bachelor's degree. Term is often used interchangeably with degree program.

Major studies

A component within a degree program that provides fundamental education for a particular career discipline.

Minor

A sequence of related courses consisting of 15 or more semester hours of credit.

Practicum

Directed work experience related to a program of study.

Prerequisite

A course or experience that must be successfully completed before enrollment in a designated course.

Professional Development Certificate

An alternative academic credential for individuals seeking to obtain new knowledge and skills or to update their knowledge and skills in a specific area.

Professional Electives

Required credits that are not prescribed by the program by designation of a specific course, but that are professional and specific in their content as they pertain to the major.

Program Director

The program director is responsible, with the advisement of the program committee, for the total curriculum of the major program and aids students in meeting all requirement for that program.

Racial and Ethnic Studies

A university requirement that prepares students for being engaged citizens in a highly diverse society and to come to appreciate, understand, value and respond respectfully to cultural diversity. Through the study of U.S. cultures other than those from a European origin, we hope to discourage racism and thus reduce its effects.

Readmission

An appeal procedure for students who have been dismissed or suspended, administered by the Dean of Students.

Re-Entry

An enrollment procedure followed by students who were previously enrolled in good standing at UW-Stout but whose attendance was interrupted for two or more consecutive semesters.

Registration

The process of enrolling in and paying for courses each semester.

Selectives

A group of courses from which a student must choose a prescribed number of credits to meet a program requirement.

Semester

A unit of time, generally 16 weeks long, in the academic calendar.

Specialization

A specialization is a program of study, with carefully constructed learning experiences, defined outcomes, and specified evaluation procedures. Students may enroll in the specialization as a stand-alone program or in addition to their undergraduate or graduate major.

Suspension

To be excluded from the university as a penalty for failure to meet academic or behavioral standards.

Teaching Major/Minor

A state-approved program for teacher certification for teaching at the secondary and/or elementary level.

Transcript

A copy of a student's permanent academic record.

Transfer Credit

Academic credit earned at another accredited institution and accepted toward a UW-Stout degree.

Tuition

The amount of money that must be paid for a course.

Apparel Design and Development

Introduction

The Apparel Design and Development program prepares students for careers in the apparel and fashion-related industries as team members who understand the whole of the apparel pipeline. UW-Stout graduates hold careers in apparel product design and development, apparel product management, and apparel quality assurance.

Apparel design courses integrate consumer needs and desires with aesthetics and technology as they address societal and ethical issues. The technical courses are supported by state-of-the-art laboratories. Yearly, the program has credit-producing learning experiences traveling to New York City and other apparel and fashion centers. A semester of study at the American College in London is available to program students.

The Apparel Design and Development program is one of only 13 programs of its kind in North America that has affiliation status with the American Apparel and Footwear Association.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Professional Core	56 credits
Minor/Specialization	24 credits

Course grades of "C" or higher are required in the Professional Core and the concentrations.

Program Requirements

General Education

40 credits required

Communication Skills

9 credits

ENGL-101 Composition I or	
ENGL-111 Freshman English – Honors I	3
ENGL-102 Composition II or	
ENGL-112 Freshman English – Honors II or	
ENGL-113 Honors Seminar I	3
SPCOM-100 Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

10 credits

MATH-120 Introductory College Mathematics	4
STAT-130 Elementary Statistics	2

Choose one natural science course with a lab.

Arts and Humanities

6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

6 credits

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues

3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning

3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives

3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Professional Core

56 credits required

Major Studies: Foundation Level

27 credits

APRL-134 Global Fashion Industry	3
APRL-166 Apparel Construction I	3
APRL-167 Textiles I: Theory, Fibers and Structures	3
APRL-180 Pattern Development	3
APRL-211 History and Culture of Fashion	3
APRL-225 Target Market Research and Line Development	3
APRL-250 Textiles II: Evaluation	3
APRL-272 Quality Analysis of Sewn Products	3
APRL-286 Apparel Construction II: Cut and Sew Knits	3

Major Studies: Apprentice Level

17 credits

APRL-290 Specification and Fit Development	3
APRL-373 Advanced Pattern Development	3
APRL-385 CAD for Apparel Images	3
APRL-393 Garment Engineering and Production	3
APRL-398 Field Experience or	
APRL-449 Co-op Education Experience	2
APRL-398 Field Experience or	
APRL-449 Co-op Education Experience	3

Major Studies: Designer Level

12 credits

APRL-454 Sweater Knit Design and Technology	3
APRL-464 Functional Design and Development	3
APRL-482 Studio I: Brand Development	3
APRL-485 Studio II: Collection Development	3

Minor/Specialization

24 credits required

Select from approved list of minors and specializations:

- Applied Foreign Language
- Applied Photography
- Art
- Business Administration
- Color
- Health and Fitness
- International Studies
- Journalism
- Materials
- Retailing
- Supply Chain Management
- Sustainable Design
- Web Technology

Applied Mathematics and Computer Science

Introduction

The role of mathematics in our highly scientific-technological society is basic and essential. Mathematical thought and modeling are valued tools in our sophisticated industrial community. The application of mathematics to industry and business to meet society's need is increasing. This growth and demand continues to create a need for graduates with training in Applied Mathematics and Computer Science.

The Applied Mathematics and Computer Science program prepares graduates for careers in a variety of fields by providing a foundation in mathematics, computer science, and statistics, complemented with additional courses specified by the selected concentration. Students may choose a concentration in Actuarial Science, Bioinformatics, Business Management, Information Assurance and Cyber Security, Software Development, or students may tailor their coursework to provide knowledge that will prepare them for a career path of their choice.

Students will enhance their studies and gain significant hands on experience through a capstone course or cooperative education experience. On campus, there are also opportunities in undergraduate research, tutoring, and other technical openings to enrich the educational experience.

In addition to fulfilling the university's basic admissions requirements, Applied Mathematics and Computer Science applicants must also graduate in the top 50 percent of their class, or for high schools that do not rank, have a cumulative grade point average of at least 3.00 on a 4.0 scale and have a minimum ACT composite score of 22 (SAT Math 510).

In fulfilling the necessary competencies for a degree, a student may complete the requirements for a minor in Business Administration, Economics, or Technical Writing. It is the student's responsibility to obtain approval for the minor from the department offering it.

Program Requirements for the program without a Concentration

Total for Graduation	120 credits
General Education	41-42 credits
Major Studies	77-78 credits

Program Requirements

General Education

41-42 credits required

A. Communication Skills 8 credits

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II	3
SPCOM-100	Fundamentals of Speech	2

B. Analytic Reasoning 7-8 credits

CS-144	Computer Science I	3
MATH-153	Calculus I or	
MATH-156	Calculus and Analytic Geometry I	4-5

C. Health and Physical Education 2 credits

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts 9 credits

Courses must be from three areas including creative arts, history, literature, music appreciation, performing arts and philosophy.

E. Social and Behavioral Sciences 9 credits

Courses must be from three or more areas including anthropology, economics, geography, political science, psychology and sociology.

F. Natural Sciences (with Lab) 4 credits

G. Technology 2 credits

Major Studies

77-78 credits required

Mathematics, Statistics and Computer Science Foundation

32-33 credits

CS-145	Computer Science II	3
CS-244	Data Structures	4
MATH-157	Calculus and Analytic Geometry II	4-5
MATH-158	Calculus III	3
MATH-180	Foundations of the Language of Mathematics	4
MATH-275	Linear Algebra	3
MATH-370	Modern Algebra I	3
MATH-450	Real Analysis I	3
MSCS-449	Applied Mathematics: Co-op Education Internship	2
STAT-331	Probability and Mathematical Statistics I	3

Selective Courses

9 credits

Choose 9 credits from list approved by the program director.

Approved Related Field

36 credits

The proposed program plan must be approved by the program director at least four semesters prior to graduation. The plan must indicate career path and courses that support that career. The plan may include a minor or a second major.

Professional Investigation/Exposure

Students must attend at least one professional event per semester for two years. See adviser.



Program Requirements for the Actuarial Science Concentration

Total for Graduation	120 credits
General Education	41-42 credits
Major Studies	78 credits

Program Requirements

General Education
41-42 credits required

A. Communication Skills	8 credits
ENGL-101 Freshman English – Composition or	
ENGL-111 Freshman English – Honors I	3
ENGL-102 Freshman English – Reading and Related Writing or	
ENGL-112 Freshman English – Honors II	3
SPCOM-100 Fundamentals of Speech.....	2

B. Analytic Reasoning	7-8 credits
CS-144 Computer Science I	3
MATH-153 Calculus I or	
MATH-156 Calculus and Analytic Geometry I	4-5

C. Health and Physical Education	2 credits
Courses must be from areas of health, physical education or nutrition.	

D. Humanities and the Arts	9 credits
Courses must be from three areas including creative arts, history, literature, music appreciation, performing arts and philosophy.	

E. Social and Behavioral Sciences	9 credits
ECON-210 Principles of Economics	3
Courses must be from three or more areas including anthropology, economics, geography, political science, psychology and sociology.	

F. Natural Sciences (with Lab)	4 credits
--------------------------------	-----------

G. Technology	2 credits
---------------	-----------

Major Studies
78 credits required

Mathematics/Statistics Foundation	35 credits
MATH-157 Calculus and Analytic Geometry II	5
MATH-158 Calculus III	3
MATH-180 Foundations of the Language of Mathematics	4
MATH-255 Differential Equations	3
MATH-275 Linear Algebra	3
MATH-370 Modern Algebra I	3
MATH-450 Real Analysis I	3
MSCS-449 Applied Mathematics: Co-op Education Internship.....	2
STAT-331 Probability and Mathematical Statistics I	3
STAT-332 Probability and Mathematical Statistics II	3
STAT-440 Advanced Linear Modeling-Regression and Time Series Analysis	3

Related Fields	16 credits
CS-145 Computer Science II	3
CS-244 Data Structures	4
ECON-215 Principals of Economics II.....	3
ENGL-320 Business Writing or	
ENGL-415 Technical Writing	3
MSCS-446 Numerical Analysis I	3

Selective Courses	27 credits
Remaining courses are chosen from a list of actuarial science selectives provided by the program director.	

Professional Investigation/Exposure	
Students must attend at least one professional event per semester for two years. See adviser.	

Program Requirements for the Bioinformatics Concentration

Total for Graduation	120 credits
General Education	42- 43 credits
Major Studies	77 credits

Program Requirements

General Education

42-43 credits required

A. Communication Skills **8 credits**

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II	3
SPCOM-100	Fundamentals of Speech.....	2

B. Analytic Reasoning **7-8 credits**

CS-144	Computer Science I	3
MATH-153	Calculus I or	
MATH-156	Calculus and Analytic Geometry I	4-5

C. Health and Physical Education **2 credits**

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts **9 credits**

Courses must be from three areas including creative arts, history, literature, music appreciation, performing arts and philosophy.

E. Social and Behavioral Sciences **9 credits**

Courses must be from three or more areas including anthropology, economics, geography, political science, psychology and sociology.

F. Natural Sciences (with Lab) **5 credits**

CHEM-135	College Chemistry I	5
----------	---------------------------	---

G. Technology **2 credits**

BIO-210	Concepts and Issues in Biotechnology	2
---------	--	---

Major Studies

77-78 credits required

Mathematics, Statistics and Computer Science Foundation **39 credits**

MSCS-2XX	Introductory Bioinformatics	2
CS-145	Computer Science II	3
CS-244	Data Structures	4
CS-248	Web and Internet Programming	3
CS-443	Database Systems Manipulation and Design	3
MATH-157	Calculus and Analytic Geometry II	5
MATH-158	Calculus III	3
MATH-180	Foundations of the Language of Mathematics	4
MATH-275	Linear Algebra	3
MSCS-492	Math and Computational Foundations of Bioinformatics	3
STAT-331	Probability and Mathematical Statistics I	3
STAT-332	Probability and Mathematical Statistics II	3

Science **23 credits**

BIO-136	College Molecular Cell Biology I	5
BIO-235	Molecular Cell Biology II	4
BIO-370	Biotechnology	3
BIO-493	Bioinformatics Practicum	3
CHEM-201	Organic Chemistry I	4
CHEM-311	Biochemistry	4

Selective Courses **15 credits**

Remaining courses are chosen from a list of bioinformatics selectives provided by the program director.

Professional Investigation/Exposure

Students must attend at least one professional event per semester for two years. See adviser.



Program Requirements for the Business Management Concentration

Total for Graduation	120 credits
General Education	41-42 credits
Major Studies	78 credits

Program Requirements

General Education

41-42 credits required

A. Communication Skills 8 credits

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II	3
SPCOM-100	Fundamentals of Speech.....	2

B. Analytic Reasoning 7-8 credits

CS-144	Computer Science I	3
MATH-153	Calculus I or	
MATH-156	Calculus and Analytic Geometry I	4-5

C. Health and Physical Education 2 credits

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts 9 credits

Courses must be from three areas including creative arts, history, literature, music appreciation, performing arts and philosophy.

E. Social and Behavioral Sciences 9 credits

ECON-210	Principles of Economics I	3
----------	---------------------------------	---

Remaining courses must be from two or more areas including anthropology, geography, political science, psychology and sociology.

F. Natural Sciences (with Lab) 4 credits

G. Technology 2 credits

Major Studies

78-79 credits required

Mathematics, Statistics, and Computer Science Foundation 39 credits

CS-145	Computer Science II	3
CS-244	Data Structures	4
MATH-157	Calculus and Analytic Geometry II	5
MATH-158	Calculus III	3
MATH-180	Foundation of Language of Mathematics	4
MATH-275	Linear Algebra	3
MATH-370	Modern Algebra I.....	3
MATH-450	Real Analysis I	3
MSCS-446	Numerical Analysis I.....	3
MSCS-449	Applied Mathematics: Co-op Education Internship.....	2
STAT-331	Probability and Mathematical Statistics I	3
STAT-332	Probability and Mathematical Statistics II.....	3

Business and Related Courses 21 credits

BUACT-206	Introduction to Financial Accounting	3
BUACT-207	Introduction to Corporate and Managerial Accounting	3
BUACT-340	Business Finance.....	3
BUMGT-304	Principles of Management	3
BUMKG-330	Principles of Marketing.....	3
ECON-215	Principles of Economics II.....	3
ENGL-320	Business Writing or	
ENGL-415	Technical Writing	3

Selective Courses 18 credits

Remaining courses are chosen from a list of business management selectives provided by the program director.

Professional Investigation/Exposure

Students must attend at least one professional event per semester for two years. See advisor.

Program Requirements for the Information Assurance and Cyber Security Concentration

Total for Graduation	120 credits
General Education	41-42 credits
Major Studies	78 credits

Program Requirements

General Education

42 credits required

A. Communication Skills **8 credits**

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II	3
SPCOM-100	Fundamentals of Speech.....	2

B. Analytic Reasoning **7-8 credits**

CS-144	Computer Science I	3
MATH-156	Calculus and Analytic Geometry I or	
MATH-153	Calculus I	4-5

C. Health and Physical Education **2 credits**

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts **9 credits**

Courses must be from three areas including creative arts, history, literature, music appreciation, performing arts and philosophy.

E. Social and Behavioral Sciences **9 credits**

Courses must be from three or more areas including anthropology, economics, geography, political science, psychology and sociology.

F. Natural Sciences (with Lab) **4 credits**

G. Technology **2 credits**

Major Studies

78 credits required

Computer Science/Network Foundation **36 credits**

CS-145	Computer Science II.....	3
CS-244	Data Structures	4
CS-245	Introduction to Computer Organization	3
CS-248	Web and Internet Programming.....	3
CS-441	Computer Architecture.....	3
CS-442	Systems Programming.....	3
CS-443	Database Systems Manipulation and Design	3
CS-480	Introduction to Computer Security	3
ITM-133	Networking Fundamentals I	3
ITM-134	Networking Fundamentals II	3
ITM-383	Introduction to Network Security.....	3
MSCS-449	Applied Mathematics: Co-op Education Internship.....	2

Mathematics and Statistics **30-33 credits**

MATH-157	Calculus and Analytic Geometry II	5
MATH-158	Calculus III	3
MATH-180	Foundation of the Language of Mathematics.....	4
MATH-275	Linear Algebra	3
MATH-370	Modern Algebra I	3
MATH-371	Modern Algebra II.....	3
MATH-380	Cryptography	3
MATH-450	Real Analysis I	3
STAT-330	Probability and Mathematical Statistics for Engineering and the Sciences or	
STAT-331	Probability and Mathematical Statistics I and	
STAT-332	Probability and Mathematical Statistics II.....	3-6

Other Required Credits **9-12 credits**

ENGL-415	Technical Writing	3
----------	-------------------------	---

Remaining courses are chosen from a list of information assurance and cyber security selectives provided by the program director.

Professional Investigation/Exposure

Students must attend at least one professional event per semester for two years. See adviser.

Program Requirements for the Software Development Concentration

Total for Graduation	120 credits
General Education	41-42 credits
Major Studies	75-78 credits

Program Requirements

General Education

41-42 credits required

A. Communication Skills **8 credits**

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II	3
SPCOM-100	Fundamentals of Speech.....	2

B. Analytic Reasoning **7-8 credits**

CS-144	Computer Science I.....	3
MATH-153	Calculus I or	
MATH-156	Calculus and Analytic Geometry I	4-5

C. Health and Physical Education **2 credits**

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts **9 credits**

Courses must be from three areas including creative arts, history, literature, music appreciation, performing arts and philosophy.

E. Social and Behavioral Sciences **9 credits**

Courses must be from three or more areas including anthropology, economics, geography, political science, psychology and sociology.

F. Natural Sciences (with Lab) **4 credits**

G. Technology **2 credits**

Major Studies

78 credits required

Computer Science Foundation **30 credits**

CS-145	Computer Science II.....	3
CS-244	Data Structures	4
CS-245	Introduction to Computer Organization	3
CS-441	Computer Architecture	3
CS-442	Systems Programming.....	3
CS-443	Database Systems Manipulation and Design	3
CS-448	Software Engineering.....	3
CS-458	Advanced Software Engineering	3
CS-354	Algorithms and Artificial Intelligence	3
MSCS-449	Applied Mathematics: Co-op Education Internship.....	2

Mathematics and Statistics **27-30 credits**

MATH-157	Calculus and Analytic Geometry II	5
MATH-158	Calculus III	3
MATH-180	Foundation of the Language of Mathematics.....	4
MATH-275	Linear Algebra	3
MATH-370	Modern Algebra I.....	3
MATH-450	Real Analysis I	3
MSCS-446	Numerical Analysis I.....	3
STAT-330	Probability and Mathematical Statistics for Engineering and the Sciences or	
STAT-331	Probability and Mathematical Statistics I and	
STAT-332	Probability and Mathematical Statistics II.....	3-6

Selective Courses **18-21 credits**

ENGL-415	Technical Writing	3
----------	-------------------------	---

Remaining courses are chosen from a list of software development selectives provided by the program director.

Professional Investigation/Exposure

Students must attend at least one professional event per semester for two years. See adviser.

Program Requirement for the Mathematics Education Concentration

Total Credits to Graduation	125 credits
General Education	42-43 credits
Major Studies	82 credits

Program Requirements

General Education

42-43 credits required

A. Communication Skills **8 credits**

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II	3
SPCOM-100	Fundamentals of Speech	2

B. Analytic Reasoning **7-8 credits**

CS-144	Computer Science I	3
MATH-153	Calculus I or	
MATH-156	Calculus and Analytic Geometry I	4-5

C. Health and Physical Education **2 credits**

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts **9 credits**

LIT-xxx	Any Literature	3
HIST-210	Modern World History	3
	One course from Creative/Performing Arts	1-3
	Additional course as needed	0-2

E. Social and Behavioral Sciences **9 credits**

POLS-210	American Government	3
PSYC-110	General Psychology	3
	One course from a different area – GE listing	3

F. Natural Sciences (with Lab) **5 credits**

Must include one lab course in this area – GE listing. Need one life science and one physical science.

G. Technology **2 credits**

Major Studies

82 credits required

Mathematics, Computer Science

and Statistics Foundation

40 credits

MATH-157	Calculus and Analytic Geometry II	5
MATH-158	Calculus III	3
MATH-180	Foundations on the Language of Mathematics	4
MATH-275	Linear Algebra	3
MATH-262	Modern Geometry	3
MATH-370	Modern Algebra I	3
MATH-450	Real Analysis I	3
MSCS-280	Graph Theory	3
CS-145	Computer Science II	3
CS-244	Data Structures	4
STAT-331	Probability and Math Stats I	3
STAT-332	Probability and Math Stats II	3

Education

42 credits

STMED-101	Intro to Math and Science Education	2
STMED-185	Pre-Student Teaching I	1
EDUC-303	Educational Psychology	3
EDUC-326	Foundations of Education	2
EDUC-336	Multiculturalism: Issues and Perspectives	2
EDUC-376	Cross-Cultural Field Experience	1
EDUC-382	Secondary Reading and Language Development	2
SPED-430	Inclusion of Students with Exceptional Needs	3
STMED-260	Curriculum, Methods, and Assessment for Science, Technology and Math Education	3
STMED-360	Pre-Student Teaching II	1
MATHED-365	Mathematics Education Methods	3
EDUC-415	Classroom Management	2
STMED-401	Capstone: Math and Science Education	1
MATHED-409	Mathematics Student Teaching	16

Professional Investigation/Exposure

Students must attend at least one professional event per semester for two years.

Applied Science

Introduction

The Applied Science program offers a unique educational experience for students to learn science by doing science. The program emphasizes flexibility through a broad scientific base along with experience through a chosen career emphasis. In a world of new products and processes, the program also fosters the creativity needed to contribute to new scientific advances. Our program prepares graduates for a variety of expanding careers in biotechnology, nanotechnology, health sciences, materials science and science education. The strong academic content of the Applied Science program will also prepare graduates for entry into a variety of professional (*such as chiropractic, dental, medical, optometry, pharmacy, physical therapy or veterinary*) and graduate schools.

The curriculum is based on a core of chemistry, physics, biology and mathematics. Students will explore cutting edge topics in nanotechnology and biotechnology in addition to the many facets of applied science, including technical writing, data analysis, interpersonal communication and experiment design. Principles in management, marketing, manufacturing, and finance are introduced.

In addition to working with instructors from a broad range of fields, students gain significant hands-on experience through a field or cooperative education experience. This versatility offers the qualities that employers are looking for in today's college graduates — interpersonal and problem-solving skills, high energy level and good judgment.

Our graduates are able to enter a myriad of occupations and career paths after graduation. Some of our graduates have chosen to enter the work force directly by becoming scientific sales representatives or laboratory technicians. Many of our graduates have continued with their passion in science and have chosen graduate schools in fields ranging from marine microbiology to bio-nano chemistry, while other graduates have entered dental or pharmacy schools.

In addition to fulfilling the university's basic admission requirements, Applied Science applicants must also have an ACT math score of at least 22 (*SAT math 510*) and either rank in the upper 40 percent of your high school class (*or GPA of 3.0*), or have a composite ACT score of 22. Nontraditional or transfer student admission will be based on current admission standards with guidance from the program director.

General Requirements

Bachelor of Science Degree

Total for Graduation	120-121 credits
General Education	40 credits
Major Studies	80-81 credits

General Education

40 credits required

Communication Skills **9 credits**

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences **10-13 credits**

CHEM-135	College Chemistry	5
	(<i>Interdisciplinary and Biotechnology concentrations only</i>)	
MATH-153	Calculus I or	
MATH-156	Calculus and Analytic Geometry I	4-5
MATH-154	Calculus II or	
MATH-157	Calculus and Analytical Geometry II	4-5
	(<i>Materials and Nanoscience Concentration only</i>)	
STAT-320	Statistical Methods or	
STAT-330	Probability and Statistics for Engineering and the Sciences ...	3
	(<i>Interdisciplinary and Biotechnology concentrations only</i>)	
NANO-101	Explorations in Nanotechnology	
	(<i>Materials and Nanoscience Concentration only</i>)	2

Arts and Humanities **6 credits**

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.

Social and Behavioral Sciences **6 credits**

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues **3 credits**

Courses must be from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning **3 credits**

Courses must be from the list of approved social responsibility and ethical reasoning courses.

Selectives **0-3 credits**

Courses/credits may be selected from any category to meet the 40-credit requirement.

Program Requirements for the Interdisciplinary Concentration

Major Studies

80 credits required

Required Courses 40 credits

APSC-101	Applied Science Profession I	1
APSC-349	Cooperative Education Program in Applied Science or	
APSC-398	Field Experience in Applied Science	1-8
APSC-401	Applied Science Profession II	1
BIO-135	Organismal Biology	4
BIO-136	College Molecular Cell Biology I	5
CHEM-136	College Chemistry II	5
CHEM-201	Organic Chemistry I	4
CHEM-331	Quantitative Analysis	3
CHEM-335	Instrumental Methods of Analysis	3
ENGL-410	Scientific Communication	3
PHYS-241	College Physics I or	
PHYS-281	University Physics I	5
PHYS-242	College Physics II or	
PHYS-282	University Physics II	5

Elective Courses 16-22 credits

Choose 200 level or higher science-related courses approved by your program director to fulfill the 120 credit graduation requirement.

Minor or Second Major 18-24 credits

Choose a minor that is not chemistry, biology or physics. Students should work with a minor adviser to complete requirements. In lieu of a minor, students may declare and complete a second major. Students must work with both program directors to meet requirements for each major and recognize that completion of two majors will exceed 120 credits.

Program Requirements for the Biotechnology Concentration

Major Studies

80 credits

Required Courses 62-66 credits

APSC-101	Applied Science Profession I	1
APSC-349	Cooperative Education Program in Applied Science or	
APSC-398	Field Experience in Applied Science or	
APSC-449	Cooperative Education Experience	1
APSC-401	Applied Science Profession II	1
BIO-135	Organismal Biology.....	4
BIO-136	College Molecular Cell Biology I.....	5
BIO-235	Molecular Cell Biology II	4
BIO-370	Biotechnology	3
BIO-400	Special Topics in Biotechnology	1-2
BIO-470	Advanced Biotechnology	5
BIO-489	Advanced Biology Experience	1-4
CHEM-136	College Chemistry II	5
CHEM-201	Organic Chemistry I	4
CHEM-204	Organic Chemistry II Lecture	3
CHEM-206	Organic Chemistry II Laboratory	1
CHEM-311	Biochemistry	4

CHEM-331	Quantitative Analysis	3
CHEM-412	Advanced Biochemistry	3
ENGL-410	Scientific Communication	3
PHYS-241	College Physics I or	
PHYS-281	University Physics I	5
PHYS-242	College Physics II or	
PHYS-282	University Physics II	5

Elective Courses 14-18 credits

Choose 200 level or higher biology, chemistry or physics courses approved by your adviser to fulfill the 120 credit graduation requirement.

Program Requirements for the Materials and Nanoscience Concentration

Major Studies

credits required

Required Courses 57 credits

APSC-101	Applied Science Profession I	1
APSC-349	Cooperative Education Program in Applied Science or	
APSC-398	Field Experience in Applied Science or	
APSC-449	Cooperative Educational Experience.....	1
APSC-401	Applied Science Profession II	1
CHEM-135	College Chemistry I	5
CHEM-136	College Chemistry II	5
CHEM-301	Physical Chemistry Lecture.	3
CHEM-303	Physical Chemistry Laboratory.	1
CHEM-341	Chemistry of Materials.....	4
ENGL-410	Scientific Communication	3
MATH-250	Differential Equations with Linear Algebra.....	3
NANO-301	Nano Structures.....	3
NANO-330	Characterization of Nanomaterials	3
NANO-401	Nanotechnology Applications.....	3
PHYS-281	University Physics I.....	5
PHYS-282	University Physics II.....	5
PHYS-327	Solid State Physics.....	3
PHYS-329	Atomic and Nuclear Physics	3
STAT-330	Probability and Statistics for Engineering and the Sciences ...	3
BIO-489	Advanced Biology Experience or	
CHEM-489	Advanced Chemistry Experience or	
PHYS-489	Advanced Physics Experience	2

Elective Courses 23-24 credits

Choose a technical emphasis in Material Physics, Nanobiotechnology or Entrepreneurship.

Applied Social Science

Introduction

The Applied Social Science degree at UW-Stout is designed to provide graduates with both marketable jobs skills and the flexibility to adapt to the rapidly changing nature of U.S. society. The degree has four major emphases providing students with 1) social science theoretical perspectives, 2) a solid knowledge base in the social sciences and history, 3) the ability to apply critical thinking skills to creatively solve practical problems in the social, economic and political arenas, and 4) strong leadership and interpersonal skills in an increasingly diverse and changing workforce. Having both social science theoretical perspectives and a solid foundation in social science knowledge, students will be able to apply critical and creative thinking skills to successfully problem solve in their future employment fields. Upon completion of their Applied Social Science degree, students will have skills in data collection, evaluation and analysis, presentation, and problem solving.

The program is interdisciplinary and provides breadth of knowledge through coursework in the areas of economics, history, political science, geography, psychology, anthropology, and sociology. It offers depth of knowledge by giving students the opportunity to select a concentration in an area of social science with additional, upper-level courses. It also offers students an opportunity to enhance their broad knowledge in the social sciences through completion of a complementary applied minor or by completing additional applied coursework, in preparation for employment in areas such as environmental analysis, global studies, human resources and other services. Students must receive a minimum grade of 2.0 or "C-" in all Professional Core and Social Science Concentration courses.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	34 credits
Concentration	24 credits
Applied Area or Minor	21-24 credits

Program Requirements

General Education

40 credits required

Communication Skills

9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

10 credits

MATH-120	College Mathematics I (or higher)	4
----------	---	---

Remaining courses must include a natural science with a lab and additional coursework as needed to reach the 10-credit requirement.

Arts and Humanities

6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, literature, music appreciation, performing arts, and philosophy.

Social and Behavioral Sciences

6 credits

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues

3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning

3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives

3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

34 credits

ANTH-220	Cultural Anthropology.....	3
APSS-100	Introduction to Social Sciences	1
APSS-200	Applied Social Analysis I	3
APSS-300	Applied Social Analysis II	3
APSS-400	Applied Social Analysis III	3
ECON-210	Principles of Economics I	3
ECON-215	Principles of Economics II	3
ENGL-247	Critical Writing.....	3
GEOG-104	World Geography or	
GEOG-251	Introduction to Geography and GIS	3-4
HIST-210	Modern World History	3
POLS-210	American Government.....	3
SOC-110	Introductory Sociology	3

Concentrations

24 credits

History and Politics

24 credits

Required courses:

HIST-120	Early U.S. History	3
HIST-121	Modern U.S. History	3
POLS-270	Comparative Politics	3
POLS-340	International Relations.....	3

Choose an additional 12 credits from a list of approved courses to fulfill the 24-credit requirement.

Economics

24 credits

Required courses:

BUACT-206	Introduction to Financial Accounting	3
ECON-410	Microeconomics	3
ECON-415	Macroeconomics	3
ECON-445	Public Finance or	
POLS-315	Public Policy or	
SOC-225	Social Problems	3

Choose an additional 12 credits from a list of approved courses to fulfill the 24-credit requirement.

Sociology/Anthropology

24 credits

Required courses:

ANTH-400	Applied Anthropology	3
SOC-225	Social Problems or	
SOC-345	Social Stratification	3
SOC-250	Social Psychology	3
ANTH-3XX	Social Theory or	
SOC-3XX	Social Theory	3

Choose an additional 12 credits from a list of approved courses to fulfill the 24-credit requirement.

Applied Areas or Complementary Minor

21-24 credits

Select an Interdisciplinary Applied Area or a complementary minor:

Interdisciplinary Applied Areas

- ▶ Environmental Issues and Analysis
- ▶ Global Studies

or student-designed applied coursework with adviser approval.

Pre-approved Minors

- ▶ Applied Peace Studies
- ▶ Business Administration
- ▶ Disability Services
- ▶ Environmental Issues and Analysis
- ▶ Environmental Studies
- ▶ Geographic Information Systems
- ▶ Global Studies
- ▶ Human Development and Family Studies
- ▶ Human Resource Management
- ▶ Military Leadership
- ▶ Project Management
- ▶ Quality Management
- ▶ Sustainable Design and Development
- ▶ Tourism
- ▶ Woman and Gender Studies Minor

Art Education

Introduction

The Art Education program provides students with experience in liberal studies, art history, studio art and professional education. It is a Bachelor of Science degree program that prepares students for certification by the Department of Public Instruction for teaching art in elementary and secondary schools. An understanding of general studies, art history, the present status of art and the educational environment, with an inquisitive approach toward problem solving, will move students to a professional level. Experienced art and design faculty ensure current course content and serve as advisers for students. Pre-teaching observation, presented at the sophomore level, provides students with an early involvement in elementary and secondary schools. A required mid-program review offers students an overview of their progress. Extensive library resources and the art and design department visual resource center are significant assets. Foreign study opportunities allow students variety in cultural experiences. An optional 11 credit additional concentration in Adaptive Education is available.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

A mid-program portfolio review and a screening for continuation in the Art Education program are required for graduation. Before student teaching, students must have a minimum overall grade point average of 2.75, successfully complete the standardized content examination required by the Wisconsin Department of Public Instruction, compile a professional education portfolio and be fully admitted from pre-Art Education status to the Art Education program. Students present an exhibition of their work during one semester of their senior year. Students must achieve a minimum grade of "C" (2.0) or better in each class, achieve a 2.75 grade point average in all art, art education, art history, design, and professional education courses, and successfully complete student teaching at both primary and secondary levels before graduation.

Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: www.uwstout.edu/soe/current/ugbmi.cfm.

- ▶ Pass one of the following skills tests: PPST, CORE, ACT, SAT or GRE. Test scores and test completion dates must meet required specifications as detailed on the SOE web page listed above
- ▶ Pass the required teacher background check
- ▶ Earn a grade of at least 2.00 (C) in ENGL-101 or ENGL-102 or ENGL-111 and ENGL-112
- ▶ Earn a grade of at least 2.00 (C) in SPCOM-100
- ▶ Earn a minimum grade of 2.00 (C) in ART-108 Introduction to Art Education course
- ▶ Complete EDUC-326 Foundations of Education.
- ▶ Satisfactorily complete Benchmark I Review

Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: www.uwstout.edu/soe/current/ugbmii.cfm.

- ▶ Complete Application for Student Teaching form
- ▶ Maintain a 2.75 grade point average
- ▶ Pass Content Knowledge Exam (*Praxis II*)
- ▶ Receive clearance through an updated background check
- ▶ Complete a satisfactory tuberculosis (*TB*) test
- ▶ Receive satisfactory portfolio assessment by faculty
- ▶ Receive satisfactory rating on Benchmark II Student Interview
- ▶ Submit copies of resume to the School of Education prior to student teaching

Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: www.uwstout.edu/soe/current/ugbmiii.cfm.

- ▶ Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- ▶ Complete all program coursework
- ▶ Meet all program-specific requirements
- ▶ Student teach at two levels: Elementary School and High School.
- ▶ Receive a satisfactory student teaching assessment

Program Requirements

General Education

40 credits required

Communication Skills 9 credits

A grade of "C" or better is required in English and speech.

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I.....	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Science 10 credits

MATH-118	Concepts of Mathematics	4
----------	-------------------------------	---

Remaining courses must be from the areas of analytic reasoning and natural sciences; at least one natural science course with a lab is required.

Arts and Humanities 6 credits

PHOTO-130	Introduction to Still and Moving Image Photography.....	3
LIT-XXX	Any Literature	3

Social and Behavioral Sciences 6 credits

ANTH-220	Cultural Anthropology.....	3
PSYC-110	General Psychology	3

Contemporary Issues 3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning 3 credits

EDUC-330	Multiculturalism	3
----------	------------------------	---

Selective 3 credits

ART-100	Drawing I	3
---------	-----------------	---

Major Studies

80 credits

Art and Design Requirements 24 credits

ART-101	Two-Dimensional Design Foundations	3
ART-103	Three-Dimensional Design Foundations	3
ART-200	Drawing II	3
ART-209	Painting I	3
ART-213	Ceramics I	3
ART-215	Art Metal I	3
ART-217	Printmaking I.....	3
DES-220	Introduction to 2D Digital Imaging.....	3

Advanced Studio Selective 6 credits

Select courses/credits from one studio focus area.

Art History Requirements 12 credits

ART-307	Aesthetics and Contemporary Art Theory or	
ARTH-XXX	Non-Western elective	3
ARTH-223	Survey of Art – Ancient through Medieval.....	3
ARTH-224	Survey of Art – Renaissance through 20th Century	3
ARTH-336	Modern Art or	
ARTH-337	Contemporary Art	3

Professional Education Requirements 38 credits

ARTED-108	Introduction to Art Education	2
ARTED-208	Pre-teaching Observation	3
ARTED-308	K-12 Art Education Theory, Methods and Practice	5
ARTED-408	Student Teaching Art Education — Elementary	8
ARTED-409	Student Teaching Art Education — Secondary	8
EDUC-303	Educational Psychology	3
EDUC-326	Foundations of Education.....	2
RDGED-382	Content Area Reading.....	2
EDUC-415	Classroom Management	2
SPED-430	Inclusion of Students With Exceptional Needs	3

Business Administration

Introduction

The Business Administration program at UW-Stout is unique in that it blends business with technology. It has a solid foundation of general-liberal studies and covers the functional areas of marketing, manufacturing, finance, personnel, accounting and law. It also requires comprehensive courses in policies, management information systems, leadership, and the legal and ethical aspects of management. The unique aspect of requiring credits in a technical component allows a student to tap one or more of UW-Stout's technology areas such as construction, graphic arts management, information systems, logistics management, loss control, packaging, quality management, training, retail management, hospitality and tourism management, and the like to complement the business program.

Keeping pace with the demands of the ever-changing business environment, the business degree at UW-Stout has added a concentration in supply chain management. Recognizing that this is a specialized skill that is being driven by globalization, cost control and increased customer service levels and high quality requirements, the business program has reached out to give our students an opportunity to specialize in this critical area of commerce. Supply chain management encompasses all logistics management activities. Since this area of business integrates supply and demand management within and across companies, and represents approximately 70 to 80 percent of the cost structure of a typical company, it is necessary to operate an efficient supply chain in order to compete. Thus businesses have deemed this to be a critical business function and skill.

Recent graduates have obtained positions in areas of sales, retailing, production control, manufacturing supervision, purchasing, cost accounting, human resource management, restaurant management, customer service, banking and others.

General Requirements Bachelor of Science Degree

Total for graduation	124 credits
General Education	42 credits
Professional Preparation	8-9 credits
Major Studies	73-74 credits

A grade point average of at least 2.5 for the last 64 credits earned or a grade point average of 2.5 overall for UW-Stout credits earned in program is required.

Program Requirements

General Education

42 credits required

A. Communication Skills 8 credits

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II	3
SPCOM-100	Fundamentals of Speech	2

B. Analytic Reasoning * 6 credits

STAT-130	Elementary Statistics	2
MATH-123	Finite Mathematics with Applications (or more advanced)	4

C. Health and Physical Education 2 credits

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts 9 credits

Courses must be from three or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

E. Social and Behavioral Sciences 9 credits

ECON-210	Principles of Economics I	3
----------	---------------------------------	---

Remaining courses must be from two or more areas including anthropology, geography, political science, psychology and sociology.

F. Natural Sciences (with Lab) 4 credits

G. Technology 2 credits

H. General Education Electives 2 credits

Courses must come from categories A, B, D, E and F.

Professional Preparation

8-9 credits

Problem Solving 3 credits

Select one course from the following:

RD-205	Design for Industry	3
ENGL-247	Critical Writing	3
LOG-250	Critical Thinking	3
LOG-301	Introduction to Logical Thinking	3

Business Writing 3 credits

ENGL-320	Business Writing or	
ENGL-415	Technical Writing	3

Information Technology 2-3 credits

Select one course from the following:

ICT-103	Information and Communication Technologies	3
ICT-305	Office Automation Technology	3
MEDIA-375	Web Production and Distribution	3
XXX-XXX	Any computer-based information systems course from a specific technical emphasis area	1-3

Major Studies for degree without concentration

73-74 credits required

At least 50 percent of these credits must be taken at UW-Stout.

Business Core 28 credits

BUACT-206	Introduction to Financial Accounting	3
BUACT-207	Introduction - Corporate and Managerial Accounting.....	3
BUACT-340	Business Finance	3
BUMGT-100	Introduction to Business Administration	1
BUMGT-304	Principles of Management	3
BUMIS-333	Management Information Systems - Decision Support Systems	3
BUMKG-330	Principles of Marketing	3
BULGL-318	Business Law I.....	3
ECON-215	Principles of Economics II.....	3
INMGT-200	Production and Operations Management or	
INMGT-210	Service Operations Management	3

Professional Core 33 Credits

Select one course from each of the following areas:

BUACT-XXX	Any Accounting	3
BUINB-XXX	Any International Business or	
ECON-480	International Economics.....	3
BULGL-XXX	Any Business Legal	3
BUMGT-XXX	Any Business Management - Experiential Learning	2
BUMKG-XXX	Any Business Marketing	3
BUMIS-XXX	Any Business Management Information Systems - Integrated Systems	3
INMGT-XXX	Any Industrial Management - Production Operations	3
INMGT-XXX	Any Industrial Management - Practicum	3
XXX-XXX	Any Human Resources	3
XXX-XXX	Any Management.....	2-3
XXX-XXX	Any Business Electives	4

Technical Component 10 credits

Select courses related to one area of technology that relates to your selected professional core. Courses may be selected from construction, graphic arts management, information systems, logistics management, loss control, packaging, quality management, training, retail management, hospitality and tourism management or others with approval of the program director.

Electives 2-3 credits

Major Studies for degree with Supply Chain Management Concentration

73-74 credits required

At least 50 percent of these credits must be taken at UW-Stout.

Business Core * 28 credits

BUACT-206	Introduction to Financial Accounting	3
BUACT-207	Introduction - Corporate and Managerial Accounting.....	3
BUACT-340	Business Finance	3
BULGL-318	Business Law I.....	3
BUMIS-333	Management Information Systems - Decision Support Systems	3
BUMGT-100	Introduction to Business Administration	1
BUMGT-304	Principles of Management	3
BUMKG-330	Principles of Marketing.....	3
ECON-215	Principles of Economics II.....	3
INMGT-200	Production/Operations Management.....	3

Concentration Requirements * 44-47 Credits

BUACT-335	Accounting for Management Decisions.....	3
BUINB-338	International Logistics	3
BULGL-319	Business Law II or	
BULGL-401	Legal Environment of Business.....	2-3
BUMGT-489	Business and Industrial Internship or	
BUMGT-449	Cooperative Education Experience	2
BUMKG-337	Procurement, Sourcing and Supply Chain Management	3
BUMKG-438	Principles of Logistics	3
BUMKG-439	Seminar: Supply Chain Systems Design.....	3
INMGT-305	Resource Planning and Materials Management.....	3
INMGT-314	Industrial Enterprise Practicum.....	3
INMGT-320	Quality Tools	3
INMGT-325	Quality Management.....	3
INMGT-365	Project Management	3
INMGT-400	Organizational Leadership or	
INMGT-430	Employee Involvement: Work Teams	2-3
INMGT-405	Resource Planning and Materials Management Practicum.....	3
INMGT-440	Lean Enterprise	3
RC-381	Occupational Safety/Loss Control or	
TRHRD-360	Training Systems in Business and Industry.....	2-3

Electives 1-2 credits

* Courses require a 3.0 grade point average under Analytical Reasoning, Professional Studies and Concentration Requirements.

Career, Technical Education and Training

Introduction

The B.S. in Career, Technical Education and Training prepares teachers for post-high school settings such as junior colleges, public and private technical colleges, and industrial training programs.

A student must obtain a minimum of 4,000 hours of appropriate work experience for provisional certification to teach career, technical and adult education courses in Wisconsin technical colleges.

Students must apply for admission to the education sequence. Candidates must hold a cumulative grade point average of at least 2.75.

Articulation Agreement There is an approved articulation agreement for this program with all of the Wisconsin Technical Colleges. The articulation agreement covers all Associate of Applied Art and Associate of Applied Science programs.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

Program Requirements

General Education

40 credits required

Communication Skills **9 Credits**

ENGL-101 Composition I	3
ENGL-111 Freshman English – Honors I	3
ENGL-102 Composition II or	
ENGL-112 Freshman English – Honors II or	
ENGL-113 Honors Seminar I	3
SPCOM-100 Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences **10 Credits**

Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

Arts and Humanities **6 Credits**

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences **6 Credits**

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues **3 Credits**

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning **3 Credits**

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives **3 Credits**

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

80 credits required

Technical

47 credits

Because each student brings different qualifications as a result of prior training and experience, the student, with the assistance of the program director, will define all 47 technical credits in terms of student and job competency needs.

Professional Component

33 credits

Minimum grade of "C" required in all professional component courses.

CTE-302 Principles of Career and Technical Education*	2
CTE-334 Performance Analysis	3
CTE-405 Methods of Teaching CTET*	2
CTE-438 Course Construction for CTET*	2
CTE-440 Instructional Evaluation in CTET*	2
EDUC-336 Multiculturalism: Issues and Perspectives*	2
EDUC-403 Educational Psychology for the Adult Learner*	2
ICT-360 Introduction to Media in Education and Training	2
INMG-400 Organizational Leadership or	
PSYC-382 Human Resource Management	3
SCOUN-301 Introduction to Guidance*	2
TRHRD-360 Training Systems in Business and Industry	3
CTE-408 Student Teaching in CTET or	
TRHRD-389 Training Internship	1- 8

** Course content is mandated for Wisconsin Technical College System certification.*

Computer Engineering

Introduction

The Computer Engineering program at UW-Stout is ideally suited to meet the needs of regional and national industries by providing computer engineers with a strong background in both electrical engineering and computer science. Graduates of this program are equipped to work with both hardware and software aspects of computer systems.

Demand for computer engineers is strong, as computer systems of all sizes — from computer chips in cellular telephones to computer-controlled equipment in large manufacturing environments — are ubiquitous in present-day society.

UW-Stout's Computer Engineering program is a calculus-based program which progresses from solid foundations in mathematics and science through analysis and design. The program includes a strong emphasis on laboratory activities and student engineering design projects, with a particular focus on the design of hardware and software for engineering systems that utilize embedded digital processors such as microprocessors, microcontrollers, digital signal processors and personal computers.

General Requirements

Bachelor of Science Degree

Total for graduation.....	131
General Education	43
Major Studies	88

Program Requirements

General Education

43 credits required

A. Communication Skills **8 credits**

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II	3
SPCOM-100	Fundamentals of Speech.....	2

B. Analytic Reasoning **8 credits**

MATH-153	Calculus I	4
MATH-154	Calculus II	4

C. Health and Physical Education **2 credits**

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts **9 credits**

PHIL-235	General Ethics	3
----------	----------------------	---

Remaining credits must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, and performing arts.

E. Social and Behavioral Sciences **9 credits**

Courses must be from three or more areas including anthropology, economics, geography, political science, psychology and sociology.

F. Natural Sciences (with Lab) **5 credits**

CHEM-135	College Chemistry I	5
----------	---------------------------	---

G. Technology **2 credits**

Major Studies

88 credits required

Mathematics and Basic Sciences **19 credits**

MATH-270	Discrete Mathematics	3
MATH-250	Differential Equations With Linear Algebra	3
PHYS-281	University Physics I	5
PHYS-282	University Physics II	5
STAT-330	Probability and Statistics for Engineering and the Sciences	3

Engineering Core **14 credits**

CEE-205	Circuits Analysis and Design	4
INMGT-300	Engineering Economy	2
MECH-293	Engineering Mechanics	3
MECH-294	Mechanics of Materials	3
MFGE-275	Thermodynamics and Heat Transfer	2

Computer Engineering **55 credits**

CEE-225	Digital Logic	3
CEE-215	Electronics	4
CEE-235	Signals and Systems	3
CEE-325	Digital System Design	3
CEE-335	Automatic Control Systems	4
CEE-345	Microprocessor System Design	3
CEE-355	Applied Electromagnetics	3
CEE-425	Data Communications and Computer Networking	3
CEE-435	Digital Signal Processing or	
CEE-XXX	Fundamentals of Wireless Communication	3
CEE-445	Embedded System Design	3
CEE-405	Capstone I: Computer Engineering Design	2
CEE-410	Capstone II: Computer Engineering Design	2
CS-144	Computer Science I	3
CS-145	Computer Science II	3
CS-244	Data Structures	4
CS-245	Introduction to Computer Organization	3
CS-441	Computer Architecture	3
CS-442	Systems Programming	3

Construction

Introduction

The Construction program is designed to prepare individuals for a variety of responsible positions in the field of construction.

Broad objectives of the program include developing fundamental knowledge of science, engineering, business, management, architecture and construction principles; applying scientific, technological and management principles to the solution of construction problems; and integrating diverse scientific and technical areas as they impact on the construction field.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	41 credits
Major Studies	79 credits

Program Requirements

General Education

41 credits required

Communication Skills 9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences 11 credits

MATH-153	Calculus I	4
STAT-130	Elementary Statistics.....	2
PHYS-241	College Physics I	5

Arts and Humanities 6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences 6 credits

ECON-201	General Economics or	
ECON-210	Principles of Economics I	3
POLS-210	American Government.....	3

Contemporary Issues 3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning 3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives 3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

79 credits required

Business and Management 15 credits

BUACT-201	Financial–Managerial Accounting or	
BUACT-206	Introduction to Financial Accounting.....	3
ENGL-320	Business Writing or	
ENGL-415	Technical Writing	3
INMGMT-300	Engineering Economy	3
INMGMT-400	Organizational Leadership.....	3
PSYC-382	Human Resource Management.....	3

Prerequisite Courses 25 credits

AEC-120	Construction Industry Orientation and Documents	3
AEC-131	Architectural Graphics	3
AEC-171	Light Construction Method and Materials	3
AEC-237	Architectural Technology	3
AEC-370	Construction Estimating I	3
AEC-458	Structural Systems – Wood and Steel	3
BUMGT-304	Principles of Management	3
PHYS-321	Statics and Strength of Materials	4

Architecture, Engineering and Construction 39 credits

AEC-270	Heavy Construction Methods and Equipment.....	3
AEC-273	Concrete and Masonry Technology.....	3
AEC-352	Building Mechanical Systems.....	3
AEC-353	Building Electrical Control Systems	3
AEC-357	Site Engineering.....	3
AEC-449	Cooperative Education Experience	3
AEC-459	Structural Systems – Concrete and Masonry	3
AEC-470	Construction Estimating II	3
AEC-471	Project Scheduling and Cost Control	3
AEC-472	Management of Construction	3
BULGL-473	Legal Aspects of Construction	3
PHYS-257	Introduction to Geology and Soil Mechanics	3
RC-388	Construction Safety	3

Criminal Justice and Rehabilitation

Introduction

The B.S. in Criminal Justice and Rehabilitation offers a unique approach to rehabilitation. The positive change model incorporates interdisciplinary training for recognition of the underlying factors that commonly lead to unlawful behavior and development of techniques required to affect positive behavioral change. Students are able to understand the impact of disability, mental illness, and substance abuse on the involvement in unlawful behavior, and furthermore apply knowledge to focus on rehabilitation of the offender rather than punishment and incarceration. Students develop skills in oral and written communication, critical thinking, and the ability to apply ethical and legal standards in decision making. The graduate is able to integrate and apply knowledge and human relation skills in the prevention, treatment, education, and rehabilitation of offenders. The development of interpersonal and social skills and the ability to examine and analyze individual needs prepares students for successful and rewarding professional careers.

Graduates of the Criminal Justice and Rehabilitation program work in positions such as probation and parole agents, correctional treatment specialists, juvenile counselors, and diversion court officers and administrators. Research indicates an increasing future demand for all related occupations. Students are required to maintain a 2.0 GPA per university standards through their first two years, and a 2.5 GPA per program standards following their junior year (90 credits).

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

Program Requirements

General Education

40 credits required

Communication Skills 9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences 10 credits

Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

Arts and Humanities 6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.

Social and Behavioral Sciences 6 credits

PSYC-110	General Psychology	3
SOC-110	Introduction to Sociology	3

Contemporary Issues 3 credits

Courses must be from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning 3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives 3 credits

POLS-210	American Government	3
----------	---------------------------	---

Major Studies

80 credits

Required Courses (68 credits)

COUN-405	Introduction to Counseling Skills	3
HDFS-255	Lifespan Human Development	3
HDFS-335	Critical Cultural Competence	3
PSYC-361	Abnormal Psychology	3
REHAB-101	Introduction to Rehabilitation	3
REHAB-102	Community Resources	3
REHAB-201	Pre-Practicum in Rehabilitation	1
REHAB-205	Rehabilitation Practicum	4
REHAB-230	Psycho/Social Aspects of Disability	3
REHAB-310	Vocational Assessment Applications in Rehabilitation	3
REHAB-315	Rehabilitation and Criminal Justice	3
REHAB-320	Rehabilitation and Chemical Dependency	3
REHAB-321	Rehabilitation of the Public Offender	3
REHAB-317	Law Enforcement Policies and Procedures	2
REHAB-327	Psychiatric Rehabilitation	3
REHAB-333	Adolescent Substance Use/Abuse	2
REHAB-401	Principles/Caseload Management	2
REHAB-410	Job Placement Processes	3
REHAB-452	Group Process in Rehabilitation	2
REHAB-470	Work Adjustment Services	3
REHAB-480	Advanced Rehabilitation Practicum	4
REHAB-488	Collaborative Partnerships	3
SOC-315	Criminology	3
SOC-375	Sociology of Minority Groups	3

Selectives (12 credits)

Select credits from the approved list:

HDFS-420	Family Research and Methodology	3
HDFS-456	Abuse and the Family	3
HDFS-310	Family, Stress, Coping & Adaptation	1
PSYC-280	Forensic Psychology, Law & Ethics	3
PSYC-333	Drugs and the Brain	3
PSYC-370	Interpersonal Effectiveness	3
SOC-360	Sociology Juvenile Delinquency	3
SPED-300	Introduction to Cognitive Disability	3
SPED-301	Learning Disability	3

Cross-Media Graphics Management

Introduction

UW-Stout's Bachelor of Science Degree program in Cross-Media Graphics Management prepares managers and supervisors for the printing and publishing industry. Students develop an understanding of the production process, from design through manufacturing of a product to distribution of that product. As members of a production team, cross-media graphics managers work with other professionals in the industry to make important decisions on design, estimating, materials, production planning, inventory, scheduling and quality control of printed products.

Through intensive hands-on laboratory environment, the program addresses skills necessary for students to succeed in the global media marketplace. A strong emphasis is placed on the application of theory and laboratory experience to the solution of real world problems. This program will prepare pragmatic production managers with the ability to respond aggressively to the needs of the marketplace; to apply research and theory to the development of marketable media products using efficient processes; and to design with an awareness of the realities of the manufacturing process, cost, environment and needs of the customer and society.

Students involved in Cross-Media Graphics Management are required to enroll in an industrial work experience program for six to eight months in the printing, publishing and packaging industry to gain practical experience to bridge the gap from the academic classroom and laboratories of the university to the real world of work.

Well-rounded professionals are produced by a balanced curriculum made up of the following components: general education; professional management studies; and graphic technological skills that apply to a selected professional emphasis area.

Three student professional organizations complement the classroom and laboratory experiences encountered by Cross-Media Graphics Management students. The Stout Typographical Society (STS) is production-focused organization that runs a printing business and sponsors industry speakers, golf tournaments and social events, as well as an annual three-day industry field trip. The Technical Association of the Graphic Arts (TAGA) is a research oriented organization whose members research and write technical research papers that are compiled into a technical publication and entered in a competition at an international conference each spring.

The Cross-Media Graphics program is accredited by the Accrediting Council for Collegiate Graphic Communications (ACCGC).

General Requirements

Bachelor of Science Degree

Total for graduation	120
General Education	40
Major Studies	68
Emphasis Area.....	12

Program Requirements

General Education

40 credits required

Communication Skills

9 Credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

10 credits

STAT-130	Elementary Statistics or	
STAT-320	Statistical Methods	2-3
MATH-121	Introductory College Mathematics II	4

Remaining course must be a natural science course with a lab.

Arts and Humanities

6 Credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

9 Credits

ECON-201	General Economics or	
ECON-210	Principles of Economics	3

Remaining courses must be from one or more areas including anthropology, geography, political science, psychology and sociology.

Contemporary Issues

3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning

3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives

3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

68 credits required

Professional Management **32 credits**

BUACT-201	Financial-Managerial Accounting	or
BUACT-206	Introduction to Financial Accounting.....	3
BUMKG-330	Principles of Marketing	3
CMG-380	Cross-Media Graphics Estimating and Planning.....	3
CMG-482	Cross-Media Graphics Workflow Automation	3
CMG-495	Cross-Media Graphics Seminar.....	3
CMG-449	Cooperative Education Experience	2
ENGL-320	Business Writing or	
ENGL-415	Technical Writing	3
INMGT-200	Production Operations Management or	
INMGT-210	Service Operations Management.....	3
INMGT-300	Engineering Economy or	
BUMKG-370	Principles of Advertising.....	3
INMGT-365	Project Management.....	3
INMGT-400	Organizational Leadership.....	3

Graphics Technology **36 credits**

CMG-141	Cross-Media Graphics.....	3
CMG-151	Graphics Software Tools.....	3
CMG-251	Premedia Graphics Production.....	3
CMG-266	Press Systems.....	3
CMG-270	Postpress Operations	3
CMG-351	Cross-Media Personalization	3
CMG-355	ePublishing.....	3
CMG-367	Color Management	3
CMG-368	Print Optimization	3
CMG-443	Cross-Media Graphics Practicum	3
CMG-445	Publication Production	3
ICT-375	Web Production and Distribution.....	3

Emphasis Areas **12 credits**

See program director for emphasis area listing.

Dietetics

Introduction

The Dietetics program prepares graduates for careers in clinical and administrative dietetics, community and public health nutrition, corporate wellness, and nutrition education as well as for opportunities in the food services, business and industry.

The Dietetics program is currently granted approval status by the Commission on Accreditation for Dietetics Education, of the American Dietetic Association. Completion of the Didactic Program in dietetics and the baccalaureate degree meet minimum academic requirements for ADA membership, registration eligibility and application to a dietetic internship or preprofessional practice program. The B.S. degree in Dietetics is the first of three steps toward becoming a registered dietitian (RD).

The dietetic student receives an education with an emphasis on the following sciences: physical and biological; behavioral and social; communication and professional. With this background, the student can move toward the community and business management of nutritional health, food service and dietetic practices that include nutrition counseling and medical nutritional therapy.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	42 credits
Major Studies	78 credits

Supervised work experience must be obtained through participation in the Field Experience program.

Students must attain a grade point of 2.0 or better in each of the General Education and Major Studies courses. (All transferred credits will meet this program requirement.) A 2.75 or greater grade point average is required for graduation. A minimum grade of B (3.0) is required in FN-212 Nutrition. Courses marked with an asterisk () are repeatable only once, and require a cumulative grade point average of 2.50.*

Program Requirements

General Education

42 credits required

Communication Skills

9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

15-16 credits

BIO-234	Physiology and Anatomy for Health Sciences	4
CHEM-135	College Chemistry	5
MATH-120	Introductory College Mathematics I (or higher level course)	4
STAT-130	Elementary Statistics or	
STAT-320	Statistical Methods	2-3

Arts and Humanities

6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

6 credits

PSYC-110	General Psychology	3
----------	--------------------------	---

Choose 3 additional credits from one or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues

3 credits

FN-102	Nutrition for Healthy Living or	
FN-244	Farm to Fork: Food Issues	3

Social Responsibility and Ethical Reasoning

3 credits

FN-210	Issues and Ethics in Food and Nutrition	3
--------	---	---

Major Studies

78 credits required

Physical and Biological Sciences

15 Credits

BIO-306	General Microbiology	4
BIO-362	Advanced Physiology.....	3
CHEM-201	Organic Chemistry	4
CHEM-311	Biochemistry.....	4

Nutrition and Medical Nutrition Therapy

22 credits

FN-207	Medical Terminology	1
FN-212	Nutrition*	3
FN-312	Nutrition Assessment	2
FN-320	Advanced Nutrition	3
FN-413	Maternal and Child Nutrition	3
FN-415	Nutritional Issues in Gerontology	3
FN-417	Medical Nutrition Therapy I.....	3
FN-418	Medical Nutrition Therapy II.....	4

Nutrition Education/Counseling,

Communication and Community Nutrition

9 credits

FN-360	Nutrition Counseling	3
FN-380	Community Nutrition	3
FN-406	Nutrition Education.....	3

Food and Food Science

7 credits

FN-240	Food Science	4
FN-461	Multicultural Aspects of Food and Nutrition Patterns	3

Food Service Administration/Management

18 credits

BUMGT-304	Principles of Management.....	3
FN-105	Food Service Sanitation	1
FN-330	Institutional Menu Planning.....	3
HT-150	Institutional Food Purchasing	2
HT-324	Quantity Food Production	3
HT-362	Food Service Finance and Cost Control	3
HT-450	Food Service Administration	3

Career Awareness

4 credits

FN-101	Dietetics as a Profession	1
FN-397	Field Experience	2
FN-408	Preprofessional Development.....	1

Nutrition Selective

3 credits

FN-355	Sports Nutrition or	
FN-410	Food and Nutrition Policy Regulation and Law	3

Early Childhood Education

Introduction

Curriculum in the Early Childhood Education program is designed to prepare resourceful, creative and competent graduates to work in settings with young children. The program emphasizes theory and practice and meets the requirements for birth through grade three teaching certification for the State of Wisconsin. Academic course work is enriched by involvement with children in early childhood settings early in the program, with observation and participation experiences in UW-Stout's Child and Family Study Center. Graduates are employed as preschool, kindergarten and primary teachers, and administrators of early childhood care centers, curriculum specialists, and resource and referral specialists within corporations and the public sector.

General Requirements

Bachelor of Science Degree

Total for graduation.....	127 credits
General Education	48 credits
Major Studies	75 credits

Students must demonstrate proficiency in American Red Cross First Aid procedures, either by verifying current certification with their adviser, or by satisfactory completion of HLTH-340 ARC Standard First Aid and Personal Safety (*adding 1 credit to the program credit total*).

- * Required courses with a grade point of 2.0 (C) or better. Courses in which a student earns less than the required 2.0 must be retaken and at least a 2.0 earned prior to student teaching.

Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits.

- ▶ Complete EDUC-326 Foundations of Education
- ▶ Pass the PPST (*Pre-Professional Skills Test*)
- ▶ Attain a 2.75 cumulative grade point average
- ▶ Pass the required teacher background check
- ▶ Earn a grade of at least 2.00 (C) in ENGL- 101 and ENGL-102 or ENGL-111 and ENGL-112.
- ▶ Earn a minimum grade of 2.00 (C) in SPCOM-100 Fundamentals of Speech.
- ▶ Complete General Education Technology requirement
- ▶ Receive three recommendations to enter into teacher education

Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching.

- ▶ Complete electronic portfolio
- ▶ Receive satisfactory portfolio assessment by faculty
- ▶ Pass Content Knowledge Exam
- ▶ Receive clearance through an updated background check
- ▶ Maintain a 2.75 grade point average
- ▶ Complete a satisfactory tuberculosis (*TB*) test
- ▶ Submit copies of resume to the School of Education prior to student teaching
- ▶ Complete Application for Student Teaching form

Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure.

- ▶ Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- ▶ Complete all program coursework
- ▶ Meet all program-specific requirements
- ▶ Student teach at three levels: infant/toddler/preschool, kindergarten and primary.
- ▶ Receive a satisfactory student teaching assessment

Program Requirements

General Education

48 credits required

A. Communication Skills 8 credits

ENGL-101	Freshman English – Composition* or	
ENGL-111	Freshman English – Honors I*	3
ENGL-102	Freshman English – Reading and Related Writing* or	
ENGL-112	Freshman English – Honors II*	3
SPCOM-100	Fundamentals of Speech*	2

B. Analytic Reasoning 6 credits

MATH-118	Concepts of Mathematics (or more advanced)*	4
STAT-130	Elementary Statistics	2

C. Health and Physical Education 2 credits

FN-102	Nutrition for Healthy Living	2
--------	------------------------------	---

D. Humanities and the Arts 10-11 credits

LIT-300	Children's Literature*	3
HIST-120	Early U.S. History or	
HIST-121	Modern U.S. History	3
HIST-210	Modern World	3

Remaining courses must be from areas of creative or performing arts or art history.

E. Social and Behavioral Sciences 12 credits

ANTH-220	Introduction to Cultural Anthropology	3
GEOG-104	World Geography	3
POLS-210	American Government	3
PSYC-110	General Psychology *	3

F. Natural Sciences (with Lab) 8 credits

BIO-101	Introductory Biology*	4
CHEM-105	Visualizing Chemistry *	2
PHYS-258	Introduction to Geology*	2

G. Technology 2 credits

Major Studies

75 credits required

Early Childhood Education major studies 64 credits

ECE-100	Introduction to Early Childhood Programs*	2
ECE-105	Infant/Toddler Education*	3
ECE-200	Expressive Curriculum for the Young Child *	3
ECE-205	Preschool/Kindergarten Education*	3
ECE-264	Child Guidance in Preschool – K*	2
ECE-305	Primary Education*	3
ECE-313	Language Arts and Emergent Reading: Birth–K*	3
ECE-411	Early Childhood Curriculum: Mathematics*	3
ECE-415	Early Childhood Curriculum: Science/Social Studies*	4
ECE-421	Administration of Early Childhood Programs*	2
ECE-426	Classroom Management in the Primary Classroom*	2
ECE-435	Children, Families, Schools, and Communities*	2
ECE-480	Student Teaching: Infant, Toddler, Preschool*	8
ECE-493	Student Teaching: Kindergarten*	8
ECE-494	Student Teaching: Primary*	8
HDFS-124	Human Development: Early Childhood*	3
RDGED-414	Literacy Instruction in the Primary Grades*	5

Professional Education Core 11 credits

EDUC-303	Educational Psychology*	3
EDUC-326	Foundations of Education*	2
EDUC-336	Multiculturalism: Issues and Perspectives*	2
EDUC-376	Field Experience – Cross Cultural Experience *	1
SPED-305	Early Childhood Inclusion of Students With Special Needs	3

Engineering Technology

Introduction

UW-Stout's Engineering Technology degree provides a broad background in industrial practices combined with an in-depth study in an engineering-related concentration. The program is designed to prepare graduates for industrial positions related to the engineering concentration area, with an appropriately broad background for later advancement into management positions. Typical entry-level positions include Design Engineer, Project Engineer, Plant Engineer, Process Engineer, Designer, Industrial Engineer, Production Scheduler and Applications Engineer. Students in the program develop knowledge and competencies in the concentration engineering area, materials and manufacturing methods, management/overview of the industrial organization, effective oral and written communication, and the application of physical science and mathematics principles to understand and solve technological and economic problems found in industry.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	41 credits
Professional Studies	45 credits
Concentrations	34 credits

Program Requirements

General Education

41 credits required

Communication Skills

9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

14 credits

MATH-153	Calculus I	4
PHYS-241	College Physics I	5
PHYS-242	College Physics II	5

Arts and Humanities

6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

6 credits

ECON-201	General Economics or	
ECON-210	Principles of Economics I	3

Remaining course must be from an area including anthropology, geography, political science, psychology and sociology.

Contemporary Issues

3 credits

Course must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning

3 credits

Course must be selected from the list of approved social responsibility and ethical reasoning courses.

Professional Studies

45-46 credits required

BUACT-200	Financial-Managerial Accounting – Engineering Technology or	
BUACT-201	Financial-Managerial Accounting or	
BUACT-206	Introduction to Financial Accounting	2-3
BUMKG-330	Principles of Marketing	3
CHEM-135	College Chemistry	5
ELEC-204	Electricity/Electronics Fundamentals	3
ELEC-341	Electrical and Mechanical Interface Devices	3
ENGL-415	Technical Writing	3
ET-100	Introduction to Engineering Technology	1
ET-349	Cooperative Education Experience	1-2
ET-405	Engineering Technology Capstone	3
INMGT-200	Production/Operations Management	3
INMGT-400	Organizational Leadership	3
MECH-290	Mechanics of Solids I	3
MFGT-150	Introduction to Engineering Materials	3
POWER-260	Introduction to Fluid Power	2
RD-205	Design for Industry	3
RC-381	Principles of Occupational Risk Control/Safety	2-3
STAT-130	Elementary Statistics	2

Concentrations

32-35 credits required

Students elect one of the following concentrations:

Electrical

33 credits

Concentration Requirements (26 credits)

CS-144	Computer Science I	3
CS-145	Computer Science II	3
ELEC-260	Electrical Circuits	3
ELEC-271	Digital Logic and Switching.....	3
ELEC-272	Solid State Electronics	3
ELEC-274	Fundamentals of Microprocessors and Microcomputer Systems	3
ELEC-340	Motors and Generators.....	2
ELEC-382	Electronic Communications	3
ENGGR-112	Engineering Graphics Fundamentals	3

Concentration Selectives

Choose 7 credits from the following:

CS-244	Data Structures.....	4
ENGGR-210	Engineering Graphics using Solid Modeling.....	3
ENGGR-280	Engineering Graphics Applications	3
MATH-154	Calculus II	4
PKG-150	Packaging Fundamentals	3

Courses may also be selected from any 300 or 400 level courses with the following prefixes: AEC, BUINB, BULGL, BUMKG, BUSCM, CHEM, CS, ELEC, INMG, MFGT, PKG, POWER, RC, RD and SPCOM.

Facilities

32 credits

Concentration Requirements (29 credits)

AEC-131	Architectural Graphics.....	3
AEC-237	Architectural Technology.....	3
AEC-352	Building Mechanical Systems	3
AEC-353	Building Electrical and Control Systems	3
INMG-300	Engineering Economy.....	2
INMG-350	Facilities Planning.....	3
INMG-365	Project Management.....	3
INMG-450	Maintenance Management.....	3

Choose 6 credits from the following:

AEC-171	Light Construction Methods and Materials and	6
AEC-270	Heavy Construction Methods and Equipment	6
AEC-171	Light Construction Methods and Materials and	6
AEC-273	Concrete and Masonry Technology.....	6
MFGT-251	Plastics Materials/Processing.....	3
MFGT-252	Material Removal and Forming Processes	3
MFGT-253	Joining and Casting Processes	3

Concentration Selectives

Choose 3 credits from the following:

ENGGR-210	Engineering Graphics using Solid Modeling.....	3
ENGGR-280	Engineering Graphics Applications	3
PKG-150	Packaging Fundamentals	3

Courses may also be selected from any 300 or 400 level courses with the following prefixes: AEC, BUINB, BULGL, BUMKG, BUSCM, CHEM, CS, ELEC, INMG, MFGT, PKG, POWER, RC, RD and SPCOM.

Mechanical Design

32 credits

Concentration Requirements (28 credits)

ENGGR-112	Engineering Graphics Fundamentals	3
ENGGR-210	Engineering Graphics Using Solid Modeling	3
ENGGR-280	Engineering Graphics Applications	3
MFGT-251	Fundamentals of Plastics Materials Processing	3
MFGT-252	Material Removal and Forming Processes	3
MFGT-253	Joining and Casting Processes	3
MECH-291	Mechanics of Solids II	3
MECH-332	Mechanical Design	4
RD-320	Prototype Development.....	or
RD-420	Research and Development and	
RD-421	Research and Development Lab or	
ET-410	Mechanical Design Lab.....	3

Concentration Selectives

Choose 4 credits from the following:

PKG-150	Packaging Fundamentals	3
---------	------------------------------	---

Courses may also be selected from any 300 or 400 level courses with the following prefixes: AEC, BUINB, BULGL, BUMKG, BUSCM, CHEM, CS, ELEC, INMG, MFGT, PKG, POWER, RC, RD and SPCOM.

Plastics

35 credits

Concentration Requirements (31 credits)

CHEM-325	Chemistry of Polymers	4
ENGGR-112	Engineering Graphics Fundamentals	3
ENGGR-210	Engineering Graphics Using Solid Modeling	3
ENGGR-280	Engineering Graphics Applications	3
MFGT-250	Introduction to Plastics	3
MFGT-252	Material Removal and Forming Processes	3
MFGT-253	Joining and Casting Processes	3
MFGT-303	Computer Aided Manufacturing.....	3
MFGT-341	Injection Molding Technology	3
MFGT-343	Extrusion Technology	3

Concentration Selectives

Choose 4 credits from the following:

PKG-150	Packaging Fundamentals	3
---------	------------------------------	---

Courses may also be selected from any 300 or 400 level courses with the following prefixes: AEC, BUINB, BULGL, BUMKG, BUSCM, CHEM, CS, ELEC, INMG, MFGT, PKG, POWER, RC, RD and SPCOM.

Production Operations

34 credits

Concentration Requirements (29 credits)

ENGGR-112	Engineering Graphics Fundamentals	3
INMG-300	Engineering Economy.....	3
INMG-305	Resource Planning and Materials Management	3
INMG-320	Quality Tools	3
INMG-350	Facilities Planning.....	3
INMG-405	Resource Planning and Materials Management Practicum	2
INMG-440	Lean Enterprise.....	3
MFGT-251	Fundamentals of Plastics Materials and Processing	3
MFGT-252	Material Removal and Forming Processes	3
MFGT-253	Joining and Casting Processes	3

Concentration Selectives

Choose 5 credits from the following:

ENGGR-210	Engineering Graphics Using Solid Modeling	3
ENGGR-280	Engineering Graphics Applications	3
PKG-150	Packaging Fundamentals	3

Courses may also be selected from any 300 or 400 level courses with the following prefixes: AEC, BUINB, BULGL, BUMKG, BUSCM, CHEM, CS, ELEC, INMG, MFGT, PKG, POWER, RC, RD and SPCOM.

Entertainment Design

Introduction

The Bachelor of Fine Arts (BFA) in Entertainment Design program prepares students for careers in the fields of rapidly expanding and innovative fields of digital media. The entertainment design program encompasses disciplines related to the entertainment and media industry, particularly, animation, digital cinema, and comics and sequential art. UW-Stout graduates from this program hold jobs at a variety of animation studios, in the health care industry and at many graphic design and interactive design firms.

The entertainment design program will provide students with the specific skills needed to enter the industry, as well as, a strong foundation and breadth of core skills that will allow them to adapt to new technologies and fluctuating industry needs throughout their careers. The entertainment design program integrates and fosters a strong relationship between fine art and digital media, as well as, technical and creative writing skills. Students will acquire hands on experience using industry standard tools, software and creative techniques, as well as, be encouraged to participate in research projects, co-ops or study abroad programs.

A required mid-program portfolio review offers entertainment design students an assessment of their progress in foundation art and design courses. Extensive library resources and the art and design department visual resource center are significant assets. A 2.5 grade point average and a 2.0 or better in art and design department courses is required to complete this Bachelor of Fine Arts degree. Entertainment Design students must present a portfolio of their work in the final semester as part of a public exhibition hosted by the School of Art and Design.

The BFA in Entertainment Design program provides a specialized education and is accredited by the National Association for Schools of Art and Design.

General Requirements

Bachelor of Fine Arts

Total for graduation	120 credits
General Education	40 credits
Core Requirements	41 credits
Concentration Requirements	39 credits

Program Requirements

General Education

40 credits required

Communication Skills **9 credits**

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences **10 credits**

Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

Arts and Humanities **6 credits**

ARTH-223	Survey of Art: Ancient – Medieval	3
ENGL-245	Creative Writing	3

Social and Behavioral Sciences **6 credits**

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues **3 credits**

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning **3 credits**

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives **3 credits**

Courses/credits may be selected from any category to meet the 40-credit requirement.

Core Requirements

41 credits required

Studio and Related Core **32 credits**

ART-100	Drawing I	3
ART-101	2-Dimensional Design	3
ART-103	3-Dimensional Design	3
ART-200	Drawing II	3
DES-176	Intro to Digital Narrative	3
DES-200	Design Concepts and Problems	3
DES-205	Design Drawing and Concept Visualization	3
DES-220	Intro to 2D Digital Imaging	3
DES-390	Entertainment Design Portfolio/Professional Practice Seminar	1
DES-490	Senior Project Multimedia Design	6
DES-4XX	Co-op, Field Experience or other, as approved by program director	1

Art History **9 credits**

ARTH-224	Survey of Art: Renaissance – 20th Century	3
ARTH-340	History of Interactive Media or	
ARTH-319	History of Design	3
ARTH-XXX	Art History Selective	3

Concentrations

39 credits required

Animation

Required Courses (15 credits)

ART-209	Painting I	3
ART-301	Life Drawing I	3
ART-401	Life Drawing II	3

Select remaining 6 credits from the approved list.

Animation Selectives (18 credits)

See adviser for approved list of selectives.

Design Studio Selectives (6 credits)

See adviser for approved list of selectives.

Comics and Sequential Art

Required Courses (12 credits)

ART-209	Painting I	3
ART-301	Life Drawing I	3
ART-401	Life Drawing II	3
ENGL-342	Creative Writing II	3

Comics and Sequential Art and Comics Selectives (15 credits)

See adviser for approved list of selectives.

Design Studio Selectives (6 credits)

See adviser for approved list of selectives.

Art Studio Selectives (6 credits)

See adviser for approved list of selectives.

Digital Cinema

Required Courses (3 credits)

PHOTO-330	Video Production Fundamentals	3
-----------	-------------------------------------	---

Digital Cinema Selectives (18 credits)

See adviser for approved list of selectives.

Design Studio Selectives (6 credits)

See adviser for approved list of selectives.

Art Studio Selectives (12 credits)

See adviser for approved list of selectives.

Environmental Science

Introduction

Graduates obtaining a B.S. in Environmental Science are well-prepared to meet today's rapidly shifting global career demands and to face opportunities focused on environmental preservation, restoration, and sustainable management. Four concentrations are designed to prepare students for professional careers and/or advanced studies. These concentrations provide proficiency and expertise in the areas of: Land Resources, Plant Science Innovations, Aquatic Biology, and Environmental Health. Upon completion of the environmental science program, students will possess a strong foundation of environmental science, use problem-solving skills and apply theoretical principles to research, geographic information systems, statistical applications and sustainability modeling. Students are introduced to various components of industry via the co-op experience, a required internship and through projects in the Discovery Center. Graduates are prepared to solve real life environmental problems as a result of practical skills developed in the field and in the lab. The focus on global ethical responsibility combined with communication and teamwork enhance students' professionalism and social awareness for success in individual and collaborative settings.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Core Requirements	24-25 credits
Concentrations	55-56 credits

General Education

40 credits required

Communication Skills 9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytical Reasoning and Natural Sciences 12 credits

CHEM-135	College Chemistry I	5
MATH-120	Introductory College Math I or	
MATH-121	Introductory College Math II	4
STAT-320	Statistical Methods or	
STAT-330	Probability and Statistics for Engineering and the Sciences	3

Arts and Humanities 6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.

Social and Behavioral Sciences 6-7 credits

GEOG-251	Introduction to Geography and Geographic Information	4
----------	--	---

Choose three additional credits from one or more areas including anthropology, economics, political science, psychology and sociology.

Contemporary Issues 4 credits

BIO-101	Introduction to Biology and Environmental Health or	
BIO-111	Science, the Environment and Sustainability or	
BIO-141	Plants and People	4

Social Responsibility and Ethical Reasoning 3 credits

PHIL-235	General Ethics	3
----------	----------------------	---

Core Requirements

24-25 credits required

BIO-135	Organismal Biology	or
BIO-136	College Molecular Cell Biology I	4-5
BIO-242	Botany or	
BIO-252	Zoology	4
BIO-350	Ecology	3
CHEM-136	College Chemistry II	5
ENGL-410	Scientific Communication	3
ENSC-101	Environmental Science Profession	1
ENSC-349	Co-op or	
ENSC-449	Co-op or	
ENSC-398	Field Experience	1
ENSC-425	Environmental Science and Sustainability Capstone or	
SUST-425	Sustainable Design and Development Capstone	3

Concentrations

55-56 credits required

Aquatic Biology

Required Courses (26 credits)

BIO-351	Ecology Lab	2
CHEM-331	Quantitative Analysis	3
CHEM-335	Instrumental Methods of Analysis.....	3
GEOG-351	Intermediate Geographic Information Systems.....	4
GEOG-451	Advanced Geographic Information Systems	4
PHYS-258	Introduction to Geology.....	2
PHYS-358	Soil Science and Conservation	4

Selectives (29-30 credits)

See program director for the list of approved selectives.

Environmental Health

Required Courses (37-40 credits)

BIO-306	General Microbiology	4
BIO-336	Infection and Immunity	4
BIO-460	Epidemiology	3
BIO-XXX	Environmental Toxicology	4
CHEM-201	Organic Chemistry	4
CHEM-452	Environmental Regulations Management	3
MATH-153	Calculus I	4-5
PHYS-241	College Physics I	5
PHYS-242	College Physics II	5
RC-381	Principles of Occupational Risk Control/Safety	2-3

Selectives (16-19 credits)

See program director for the list of approved selectives.

Land Resources

Required Courses (33 credits)

BIO-324	Plant Taxonomy	3
BIO-351	Ecology Lab	2
BIO-352	Plant Ecology	4
BIO-355	Entomology or	
BIO-450	Aquatic Ecology and Management or	
BIO-452	Wetland Ecology	4
CHEM-331	Quantitative Analysis	3
CHEM-452	Environmental Regulations Management.....	3
GEOG-351	Intermediate Geographic Information Systems	
GEOG-451	Advanced Geographic Information Systems	
PHYS-258	Introduction to Geology	
PHYS-358	Soil Science and Conservation	

Selectives (22-23 credits)

See program director for the list of approved selectives.

Plant Science Innovations

Required Courses (20 credits)

BIO-322	Plant Pathology	3
BIO-343	Plant Physiology	4
CHEM-201	Organic Chemistry	4
CHEM-331	Quantitative Analysis	3
PHYS-258	Introduction to Geology.....	2
PHYS-358	Soil Science and Conservation	4

Innovations Selectives (35-36 credits)

See program director for the list of approved selectives.

Family and Consumer Sciences Education

Introduction

The Bachelor of Science degree in Family and Consumer Sciences Education prepares students to teach in elementary, middle, junior high and high school settings across the United States. The program prepares professionals who are knowledgeable regarding subject matter and content in the field of family and consumer sciences education, including life-span human development, personal and family relationships, parenting, consumer economics, food and nutrition, housing, textiles, and clothing.

General Requirements Bachelor of Science Degree

Total for graduation.....	126-127 credits
General Education	45 credits
Professional Core	37-38 credits
Professional Education	43 credits

An overall cumulative GPA of 2.75 is required for graduation.

Program Requirements

General Education

45 credits required

A. Communication Skills 8 credits

English and Speech courses require a grade of C or better.

ENGL-101 Freshman English – Composition or	
ENGL-111 Freshman English – Honors I	3
ENGL-102 Freshman English – Reading and Related Writing or	
ENGL-112 Freshman English – Honors II	3
SPCOM-100 Fundamentals of Speech.....	2

B. Analytic Reasoning 6 credits

MATH-XXX Any Mathematics	4
--------------------------------	---

Remaining courses must be from areas including math, logic, statistics and computer science.

C. Health and Physical Education 2 credits

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts 9 credits

LIT-XXX Any Literature	1-3
HIST-210 Modern World	3
XXX-XXX Any creative or performing arts	1-3

Remaining courses may be from any of the humanities and the arts.

E. Social and Behavioral Sciences 9 credits

ECON-210 Principles of Economics I or	
ECON-201 General Economics	3
POLS-210 American Government	3
PSYC-110 General Psychology	3

F. Natural Sciences (with Lab) 9 credits

BIO-132 Human Biology	4
CHEM-115 General Chemistry or	
CHEM-125 Principles of Chemistry for Health Sciences	5

G. Technology 2 credits

FN-220 Food Technology (recommended).....	2
---	---

Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Requirements of DPI Benchmark I must be met before moving from pre-education status to fully admitted status in the Family and Consumer Sciences Education program. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchl.shtml.

- ▶ Pass the Pre-Professional Skills Test (PPST)
- ▶ Attain a 2.75 cumulative grade point average
- ▶ Pass the required teacher background check
- ▶ Earn a grade of at least 2.00 (C) in ENGL-101 and ENGL-102 or ENGL-111 and ENGL-112.
- ▶ Earn a minimum grade of 2.00 (C) in SPCOM-100 Fundamentals of Speech.
- ▶ Earn a minimum grade of 2.00 (C) in FCSE-101 Introduction to Family and Consumer Sciences Education
- ▶ Complete EDUC-326 Foundations of Education
- ▶ Satisfactorily complete Benchmark I Portfolio Assessment

Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchl.shtml.

- ▶ Complete Application for Student Teaching form
- ▶ Maintain a 2.75 grade point average
- ▶ Pass Content Knowledge Exam (Praxis II)
- ▶ Receive clearance through an updated background check
- ▶ Complete a satisfactory tuberculosis (TB) test
- ▶ Receive satisfactory portfolio assessment by faculty
- ▶ Receive satisfactory rating on Benchmark II Student Interview
- ▶ Submit copies of resume to the School of Education prior to student teaching

Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchl.shtml.

- ▶ Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- ▶ Complete all program coursework
- ▶ Meet all program-specific requirements
- ▶ Student teach at two levels: Middle School and High School.
- ▶ Receive a satisfactory student teaching assessment

Required Professional Core

38-39 credits required

APRL-140	Textiles	3
APRL-166	Apparel Construction	3
FCSE-101	Introduction to Family and Consumer Sciences	1
FCSE-380	Consumer Economics	3
FCSE-385	Family Housing	3
FN-102	Nutrition for Healthy Living	2
FN-124	Foods	4
HDFS-115	Individual and Family Relationships	3
HDFS-124	Human Development: Early Childhood	3
HDFS-215	Dynamics of Family Development	3
HDFS-313	Parent Education/Involvement	2
HDFS-365	Family Resource Management	3

Select 5-6 credits from two or more areas:

APRL-101	Introduction to Apparel Design and Development	3
APRL-211	History of Fashion — 19th Century to Present	3
APRL-274	Fashion Industry	3
APRL-355	Special Topics in Apparel Design and Manufacturing	1-3
FN-208	Management of Food Production	3
FN-260	Menu Planning and Design	2
FN-461	Multicultural Aspects of Food and Nutrition Patterns	3
HDFS-257	Lifespan Sexuality	3
HDFS-320	Divorce, Single Parent and Remarried Family	2
HDFS-325	Human Development: Middle Childhood and Adolescence	3
HDFS-332	Death and Bereavement	3
HDFS-440	Child and Family Law	3

Professional Education

43 credits required

CTE-302	Principles of Career and Technical Education	2
EDUC-326	Foundations of Education	2

The following courses may be taken only after meeting the requirements of Benchmark I and acceptance into the Family and Consumer Sciences Education from pre-education status.

EDUC-303	Educational Psychology	3
EDUC-336	Multiculturalism: Issues and Perspectives	2
EDUC-376	Field Experience — Cross Cultural Experience	1
EDUC-382	Secondary Reading and Language Development	2
EDUC-415	Classroom Management	2
FCSE-201	Teaching Methods in Family and Consumer Sciences	2
CTE-360	Cooperative Occupational Education	2
FCSE-341	Pre-Student Teaching in FCSE	1
FCSE-390	Curriculum and Evaluation	4
FCSE-448	Student Teaching – Family and Consumer Sciences Education	16
SPED-430	Inclusion of Students With Exceptional Needs	3

Food Science and Technology

Introduction

The Food Science and Technology program prepares graduates for careers in the nation's largest business — the food industry. The program allows students the flexibility to choose courses appropriate for individual career goals or graduate study. Students focus on a variety of applicable studies such as food science, quality assurance, food analysis, and food ingredient development. Career goals might include administration, large quantity food production, sales or service, food styling, food marketing and media, or home economics. Graduates have pursued rewarding careers in restaurants and delis, health care facilities, schools and prisons. Some have found relevant career opportunities on cruise ships, or with television stations, magazines or newspapers.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	43 credits
Major Studies	59-62 credits
Electives, Minor or Student-designed focus area	15-18 credits

Work experience must be obtained through participation in the Field Experience program (after junior year). A 2.25 or better grade point average is required for graduation.

Program Requirements

General Education

43 credits required

Communication Skills

9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Science

13 credits

CHEM-135	College Chemistry I	5
BIO-234	Physiology and Anatomy	4
MATH-153	Calculus I or	
MATH-156	Calculus and Analytical Geometry I	4

Arts and Humanities

6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

6 credits

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues

3

Courses must be selected from the list of approved contemporary issues.

Social Responsibility and Ethical Reasoning

3

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selective

3

STAT-320	Statistical Methods	3
----------	---------------------------	---

Major Studies

59-62 credits

BIO-306	General Microbiology	4
BIO-406	Food Microbiology	4
BUMKG-330	Principles of Marketing or	
BUMGT-304	Principles of Management	3
CHEM-201	Organic Chemistry	4
CHEM-311	Biochemistry	4
CHEM-315	Food Chemistry	3
EDUC-307	Applied Human Relations or	
INMGT-400	Organizational Leadership	2-3
FN-240	Food Science	4
FN-123	Food Science as a Profession	2
FN-212	Nutrition	2-3
FN-350	Food Processing	3
FN-400	Food Quality	4
FN-410	Food Policy, Regulation, and Law	3
FN-435	Food Analysis	3
FN-438	Experimental Foods	3
FN-442	Basic Sensory Analysis	3
FN-450	Food Engineering	3
FN-449	Co-op or	
FN-497	Field Experience or	
FN-499	Independent Study	2
PHYS-211	Introduction to Physics or	
PHYS-241	College Physics I	3-5

Electives, Minor or Student-Designed Focus Area

15-18 credits required

Courses must be approved by adviser. Elective credits may be used to satisfy MATH and/or CHEM prerequisite requirements.

Game Design and Development

Introduction

The world is going digital. Entertainment is no exception. Sales of computer and video games have grown consistently over the past ten years and the industry is predicted to expand even more. In 2008, computer and video game software sales hit approximately \$11 billion, a 26 percent increase from 2007. Non-entertainment industries such as education, government, health, military, science, corporate training, first responders, and social change are also embracing the game technology. Serious games feature the use of interactive game technologies within non-entertainment sectors for training, advertising, simulation, or education.

Modern games are among the most demanding of computer programming applications, requiring knowledge of advanced math-

ematics and physics which form the basis of the 3D graphics, artificial intelligence, and game engines that make up the game programs. Using core skills in art and design such as drawing, digital imaging and animation, game artists create the visual elements necessary for the game including heads-up interface components, 3D environments and 3D characters. To be successful in the industry, you must be skilled in your area of expertise (*computer science or art*), be able to work with your counterparts, and apply those skills to creating games.

The Game Design and Development curriculum is based on a firm foundation of both computer science and art. Students will develop deeper skills in either art or computer science, before joining back together in the three capstone advanced project courses. These courses simulate industry by creating games using a team environment.

Program Requirements for the Art Concentration

Total for Graduation	120 credits
General Education	40-41 credits
Major Studies	79-80 credits

General Education

41 credits required

Communication Skills 9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences 11 credits

CS-141	Introduction to Programming	3
MATH-118	Concepts of Mathematics (<i>or higher</i>)	4
PHYS-211	Introduction to Physics.....	3
PHYS-212	Introduction to Physics: Lab	1

Arts and Humanities 6 credits

ART-101	Two-Dimensional Design Foundations.....	3
LIT-208	Fiction into Film	3

Social and Behavioral Sciences 6 credits

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues 3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning 3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives 2 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

80 credits required

Game Design and Development Core 26 credits

ARTH-340	History of Interactive Media	3
DES-325	Interactive Design I: Introduction to Web Design	3
EDUC-170	Video Games and Simulations in Educational Environments	2
ENGL-415	Technical Writing	3
GDD-101	Introduction to Video and Computer Game Design and Development	3
GDD-325	Two Dimensional Game Design and Development	4
GDD-450	Three Dimensional Game Design and Development I.....	4
GDD-451	Three Dimensional Game Design and Development II.....	4

Required Art Concentration Courses 36 credits

ART-100	Drawing I	3
ART-103	Three Dimensional Design Foundations.....	3
ART-200	Drawing II	3
ART-301	Life Drawing I	3
ARTH-224	Survey of Art – Renaissance Through 20th Century.....	3
DES-176	Introduction to Digital Narrative	3
DES-200	Design Concepts and Problems	3
DES-205	Design Drawing and Concept Visualization	3
DES-220	Introduction to 2D Digital Imaging	3
DES-310	Graphic Design I.....	3
DES-372	3D Modeling and Animation I	3
PHOTO-330	Introduction to Video Production	3

Complete all courses from one of the following tracks:

2D Track 18 credits

ART-209	Painting I or	
ART-401	Life Drawing II	3
DES-370	Interactive Design II: Principles and Methods (<i>repeatable</i>)	3
DES-378	Animation Studio (<i>repeatable</i>)	3
DES-379	Comics and Sequential Art Studio	3

Select 3-6 credits from DES, ART and GDD as approved by adviser.

3D Track 18 credits

ART-211	Sculpture I or	
ART-213	Ceramics I	3
DES-374	3D Modeling and Animation II.....	3
DES-373	3D Modeling and Animation III.....	3
DES-4XX	Interactive Environments.....	3

Select 3-6 credits from DES, ART and GDD as approved by adviser.

Golf Enterprise Management

Introduction

The B.S. in Golf Enterprise Management program provides a comprehensive and challenging academic experience that will prepare graduates who are leaders in the golf business profession. The program will offer a broad exposure to all facets of the business of golf industry through its interdisciplinary curriculum. The program includes exposure to golf industry best practices. Students are immersed in experiential learning through well-defined co-ops and internships.

Upon graduation, students will be able to analyze major trends in the golf industry, including tourism, consumer interests, course ownership and management, and golf retail businesses. Graduates will be able to distinguish the missions of principal national and international associations in the golf industry; understand golf facility operations from perspectives of resort, private, municipal, and daily fees courses; apply business, accounting, and marketing principles to meet management needs of golf enterprises; develop and apply strategies for attracting new customers and retaining existing customers of golf operations; apply the principles of turf management, soil science and environmental science to the layout, design and management of golf courses; and integrate the knowledge and skills obtained in the curriculum through practical experiences in the golf industry.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	50 credits
Electives.....	30 credits

Program Requirements

General Education

40 Credits

Communication Skills 9 credits

ENGL-101 Composition I or	
ENGL-111 Freshman English – Honors I	3
ENGL-102 Composition II or	
ENGL-112 Freshman English – Honors II or	
ENGL-113 Honors Seminar I	3
SPCOM-100 Fundamentals of Speech	3

Analytic Reasoning and Natural Science 10 credits

MATH-123 Finite Math With Applications (or higher)	4
STAT-130 Elementary Statistics.....	2

Remaining course must be Biology with a lab from the approved course list.

Arts and Humanities 6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences 6 credits

ECON-210 Principles of Economics I	3
--	---

Select remaining credits from the approved course list in another area including anthropology, geography, political science, psychology and sociology.

Contemporary Issues 3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning 3 credits

Courses/credits must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives 3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

50 Credits

BUACT-206 Introduction to Financial Accounting.....	3
BUACT-340 Business Finance	3
BULGL-318 Business Law or	3
HT-460 Hospitality Industry Law and Liability	
BUMGT-304 Principles of Management or	
INMG-400 Organizational Leadership	3
BUMKG-330 Principles of Marketing or	
HT-344 Hospitality and Tourism Marketing and Sales	3
BURTL-127 Basic Merchandising	3
GEM-101 Introduction to Golf Enterprise Management.....	1
GEM-201 Principles of Golf Enterprise Management	3
GEM-250 Turf Management for Golf Courses	3
GEM-277 Software and Technology	3
GEM-301 Customer Development, Retention and Marketing.....	3
GEM-450 Environmental Golf Course Management	3
GEM-X49 Co-op or Field Experience (Two co-ops or field experiences are required) ..	4
PM-370 Principles of Property Management.....	3
HT-362 Food Service Finance and Cost Control	3
PSYC-382 Human Resource Management.....	3
SRVM-111 Introduction to Global Service Management	3

Program Selectives 30 Credits

Selectives will be guided by advisement to meet your professional goals and objectives. You may elect to take a minor or specialization to fulfill the selective credits. Recommended courses will be in subjects GEM, HT, PM, SRVM, and BIO, or sophomore through senior level courses in Business subjects, INMG, SPCOM, ECON or FN.

Graphic Design and Interactive Media

Introduction

The Bachelor of Fine Arts (BFA) in Graphic Design and Interactive Media program prepares students with the skills and flexibility to adapt to the rapidly changing nature of the graphic design and interactive media industry. UW-Stout graduates work at and have opened their own design firms nationally and globally. The success of our students is derived from a program that highlights the intersections of fine art, design, history, sustainability and a strong liberal arts education.

Developing the ability and knowledge to communicate using digital/technical communication systems and processes while understanding social, psychological and economic implications in relation to a variety of clients and design situations is a central objective of this proposed program, as well. Students will acquire "hands on" experience using industry standard tools, software and creative techniques, and are encouraged to participate in research projects, co-ops or study abroad programs.

A required mid-program portfolio review offers graphic design and interactive media students an assessment of their progress in foundation art and design courses. Extensive library resources and the art and design department visual resource center are significant assets. A 2.5 overall grade point average and a 2.0 or better in art and design department courses is required to complete this Bachelor of Fine Arts degree. An experiential learning component is required of all graduates of the BFA in Graphic Design and Interactive Media program, and may be successfully completed by participating in a co-op, internship, international study program, field experience or sponsored project. Graphic Design and Interactive Media students must present a portfolio of their work in the final semester as part of a public exhibition hosted by the School of Art and Design.

The BFA in Graphic Design and Interactive Media program provides students with an innovative education that is accredited by the National Association of Schools of Art and Design.

General Requirements

Bachelor of Fine Arts

Total for graduation	120 credits
General Education	40 credits
Concentration Requirements	80 credits

Program Requirements

General Education

40 credits required

Communication Skills

9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

10 credits

Courses must be from the areas of analytical reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

Arts and Humanities

6 credits

ARTH-223	Survey of Art: Ancient – Medieval	3
PHOTO-130	Introduction to Still and Moving Image Photography	3

Social and Behavioral Sciences

6 credits

PSYC-110	General Psychology	3
----------	--------------------------	---

Choose three additional credits from one or more areas including anthropology, economics, geography, political science and sociology.

Contemporary Issues

3 credits

Courses must be selected from the approved contemporary issues courses.

Social Responsibility and Ethical Reasoning 3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives

3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Concentration Requirements

80 credits required

Design Concentration

Studio and Related (44 credits)

ART-100	Drawing I	3
ART-101	2-Dimensional Design Foundations	3
ART-103	3-Dimensional Design	3
ART-200	Drawing II	3
ART-217	Printmaking I – Serigraphy	3
DES-200	Design Concepts and Problems	3
DES-205	Design Drawing and Concept Visualization	3
DES-210	Letter Form Design	3
DES-220	Intro to 2D Digital Imaging	3
DES-310	Graphic Design I	3
DES-325	Interactive Design I: Introduction to Web Design	3
DES-360	Graphic Design II	3
DES-370	Interactive Design II: Principles and Methods	3
DES-480	Senior Project: Graphic Design	3
DES-XXX	Co-op, Field Experience or other as approved by program director	2

Design Studio Selectives (6 credits)

Select one 2D and one 3D course for a total of 6 credits; see adviser for a list of approved courses.

Art Studio Selectives (9 credits)

Students must choose at least one 2D and one 3D Art Studio course, and take a total of three courses or 9 credits; see adviser for a list of approved courses.

Art History (9 credits)

ARTH-224	Survey of Art: Renaissance – 20th Century	3
ARTH-319	History of Design	3
ARTH-333	History of Interiors and Furnishings	3

Technical (9 credits)

CMG-141	Cross-Media Graphics	3
CMG-251	Premedia Graphics Production	3
PHOTO-330	Video Production Fundamentals	3

Related (3 credits)

PSYC-377	Consumer Psychology	3
----------	---------------------	---

Interactive Media Concentration

Studio and Related (41 credits)

ART-100	Drawing I	3
ART-101	2-Dimensional Design Foundations	3
ART-103	3-Dimensional Design Foundations	3
ART-200	Drawing II	3
DES-200	Design Concepts and Problems	3
DES-205	Design Drawing and Concept Visualization	3
DES-220	Intro to 2D Digital Imaging	3
DES-310	Graphic Design I	3
DES-325	Interactive Design I: Introduction to Web Design	3
DES-360	Graphic Design II	3
DES-370	Interactive Design II: Principles and Methods	3
DES-385	Interactive Digital Design III: Advanced Concepts	3
DES-480	Senior Project: Graphic Design	3
DES-XXX	Co-op, Field Experience or other as approved by Program Director	2

Design Studio Selectives (6 credits)

See adviser for a list of approved courses.

Art Studio Selectives (12 credits)

Students must choose at least one 2D and one 3D Art Studio course, and take a total of four courses or 12 credits; see adviser for a list of approved courses.

Art History (9 credits)

ARTH-224	Survey of Art: Renaissance – 20th Century	3
ARTH-319	History of Design	3
ARTH-XXX	Art History Selective	3

Technical (9 credits)

CS-144	Computer Science I	3
CS-248	Web and Internet Programming	3
PHOTO-330	Video Production Fundamentals	3

Related Requirement (3 credits)

ENGL-388	Writing for the Internet	3
----------	--------------------------	---

Health, Wellness and Fitness

Introduction

The Health, Wellness and Fitness program prepares students to enter the healthcare arena as preventative healthcare workers. Students become knowledgeable of the causes of the major controllable health care issues in society today and into the future. They gain the skills to assist others to develop healthier lifestyles to combat major controllable health issues such as obesity, diabetes, various coronary diseases and conditions. Students learn business management skills to aid entry into the profession. The program integrates the professional domains of nutrition, fitness, health education, business procedures and management and community health to prepare prevention specialists..

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education.....	40 credits
Major Studies	59 credits
Concentration	21 credits

Program Requirements

General Education

40 credits

Communication Skills

9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

10 credits

MATH-118	Concepts of Math or higher.....	4
BIO-132	Human Biology	4

Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

Arts and Humanities

6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

6 credits

PSYC-110	General Psychology	3
----------	--------------------------	---

Remaining course must be from an area including anthropology, economics, geography, political science and sociology.

Contemporary Issues

3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning

3 credits

HWF-340	Community CPR, AED and First Aid	3
---------	--	---

Selectives

3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

59 credits

Human Sciences **16 credits**

BIO-234	Physiology and Anatomy	4
CHEM-115	General Chemistry.....	5
FN-207	Medical Terminology	1
HLTH-355	Kinesiology	3
HLTH-365	Physiology of Exercise.....	3

Health and Wellness **19 credits**

HWF-100	Introduction to Health, Wellness and Fitness	2
HWF-275	Lifespan Health, Wellness and Fitness.....	3
HWF-XXX	Relaxation/Stress Management	3
HWF-322	Fitness Assessment.....	2
HLTH-350	Prevention and Care of Athletic Injuries	3
HLTED-360	Personal Health and Fitness	3
HLTED-375	Methods in Health, Wellness and Fitness Industry	3

Nutrition **5 credits**

FN-212	Nutrition	3
FN-312	Nutritional Assessment.....	2

Psychology/Behavior Management **3 credits**

PSYC-371	Introduction to Health Psychology or	
PSYC-377	Consumer Psychology	3

Business and Management **14 credits**

BUACT-206	Introduction to Financial Accounting	3
BUMGT-304	Principles of Management	3
BUMKG-308	Marketing for Nonprofit Organizations	2
BUGL-318	Business Law I or	
HT-460	Hospitality Industry Law and Liability	3
HWF-390	Recreation Facilities Management and Leadership	3

Preprofessional Experience **2 credits**

HWF-398	Field Experience in Health, Wellness and Fitness	1
HWF-498	Advanced Field Experience in Health, Wellness and Fitness....	1

Concentrations

Fitness Professional **21 credits**

FN-355	Sports Nutrition	3
HWF-370	Personal Personal and Group Exercise: Theory and Methods	3
HWF-418	Administration of Strength Training and Conditioning	4
HT-352	Club Management	3
XXX-XXX	Electives	8

Through advising, select courses to fulfill concentration. Examples include courses from areas such as nutrition, aging, adventure education, lifespan sports, racquet sports, psychology, rehabilitation and disability.

Health and Wellness Promotions **21 credits**

BIO-128	Community Health	3
REHAB-320	Rehabilitation and Chemical Dependency	3
HDFS-345	Health Care Dilemmas and Decisions for Families	3
FN-380	Community Nutrition	3
HLTED-376	Organization and Administration in Health Education.....	3
XXX-XXX	Electives	6

Through advising, select courses to fulfill concentration. Examples include courses from areas such as nutrition, aging, disability, leisure activities, psychology and rehabilitation.

Hotel, Restaurant and Tourism Management

Introduction

Hotel, restaurant and tourism management is one of the largest and fastest growing industries in the United States. Each year, leisure time increases for thousands of Americans, and the demands on the hospitality industry are growing. Existing lodging and dining facilities are expanding and new businesses are developing to accommodate the increased demand for hospitality services.

UW-Stout's Hotel, Restaurant and Tourism Management majors receive a variety of training. The program includes studies in general education to provide students a flexible background, enabling them to adapt to a wide variety of situations in today's rapidly changing society. A choice of professional selectives provides students with flexibility to pursue a specialized field of study. The curriculum is designed to prepare competent, creative and responsible managers. Graduates are employed in the hospitality food and beverage industry, and in hotels and tourism facilities.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	59 credits
Professional Selectives	21 credits

A "C-" (1.67) or better is required for each course in the professional studies. A 2.75 grade point average is required for graduation.

Program Requirements

General Education

40 credits required

Communication Skills 9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENLG-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences 10 credits

MATH-123	Finite Mathematics with Applications (or higher)	4
STAT-130	Elementary Statistics.....	2

Remaining course must be a natural science course with a lab.

Arts and Humanities 6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences 6 credits

ECON-210	Principles of Economics I	3
----------	---------------------------------	---

Choose 3 additional credits from one or more areas including anthropology, geography, political science, psychology and sociology.

Contemporary Issues 3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning 3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives 3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

59 credits required

Foundation 16 Credits

FN-105	Food Service Sanitation	1
HT-100	Introduction to Hospitality	2
HT-121	Principles of Foodservice Operations	2
HT-140	Principles of Tourism	3
HT-235	Lodging Systems.....	3
HT-324	Quantity Food Production	3
SPAN-121	Practical Spanish I (or higher).....	2

Operations Management 15 Credits

ENGL-320	Business Writing	3
HT-200	Hospitality Organization Management	3
HT-344	Hospitality and Tourism Marketing and Sales.....	3
HT-350	Hospitality Diversity Management.....	3
PM-280	Hospitality Facilities Management	3

Operations Leadership 12 Credits

HT-454	Security and Risk Management	3
HT-457	Hospitality Management Strategies	3
HT-460	Hospitality Industry Law and Liability.....	3
HT-461	Hospitality Employee Relations.....	3

Accounting, Revenue and Sales 12 Credits

BUACT-206	Introduction to Financial Accounting.....	3
BUACT-207	Introduction to Corporate and Managerial Accounting.....	3
HT-362	Foodservice Finance and Cost Control	3
HT-383	Yield Management	3

Applied Professional Development 4 Credits

HT-449	Cooperative Education/Internship.....	2
HT-452	Hospitality Professionalism	2

Professional Selectives

21 credits required

Students select courses from focus areas, with advisement, to meet program goals. Courses at the 300 or 400 level from food and nutrition (FN), golf enterprise management (GEM), hospitality and tourism (HT), property management (PM) and service management (SRVM) may be taken to reach the 21- credit requirement.

Human Development and Family Studies

Introduction

The Human Development and Family Studies program is the study of human development and family life in which individuals, families and communities are viewed as interrelated. A multidisciplinary approach provides content and theory to enhance the understanding of people and to develop creative approaches to serving them. Graduates of the program locate positions in human services and agency-related employment settings and family life education, in addition to being prepared for advanced study.

The program integrates academic study with significant experiential learning with individuals of all ages, families and community groups. Students are involved in observation/participation, field experience, independent study and practicum throughout the program. Hospitals, human service agencies, community groups, adolescent group homes and homes for senior citizens provide opportunities for the synthesis of practical and theoretical knowledge.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	46 credits
Major Studies	59 credits
Concentration or minor	15 credits

Students must have a cumulative grade point average of 2.5 within the major studies for graduation and to register for the practicum experience.

Program Requirements

General Education

46 credits required

Communication Skills **9 credits**

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences **10 credits**

Courses must be from the areas of analytical reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

Arts and Humanities **6 credits**

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences **12 credits**

POLS-210	American Government.....	3
PSYC-110	General Psychology	3
SOC-110	Introductory Sociology	3

Choose 3 additional credits from one or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues **3 credits**

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning **3 credits**

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives **3 credits**

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

59 credits required

HDFS-101	Introduction to Human Development and Family Studies.....	1
HDFS-115	Healthy Couple Relationships*	3
HDFS-124	Human Development: Early Childhood*	3
HDFS-215	Dynamics of Family Development*	3
HDFS-225	Skill Training for Individual/Family Interventions*	3
HDFS-257	Lifespan Sexuality *	3
HDFS-270	Seminar in Self Growth	3
HDFS-325	Human Development: Mid-Childhood/Adolescence*	3
HDFS-330	Human Development: Early/Middle Adulthood*	3
HDFS-335	Seminar – Culturally Diverse Individuals and Families.....	3
HDFS-336	Experience: Developing Cultural Competence	1
HDFS-340	Human Development: Late Adulthood*	3
HDFS-345	Family Health Care/Dilemmas and Decisions for Families.....	3
HDFS-365	Family Resource Management*	3
HDFS-420	Family Research and Methodology	3
HDFS-450	Family Policy*	3
HDFS-456	Abuse and the Family	3
HDFS-490	Professional Issues in Human Development and Family Studies *	2
HDFS-491	Practicum in Human Development and Family Studies*	4

Electives **6 credits**

Select additional courses to fulfill the 120-credit requirement.

* Required to become a Certified Family Life Educator by the National Council on Family Relations. Additional required courses: HDFS-313 Parent Education, FCSE-451 Family Life Education Programs.

Student-Designed Concentration, Certification or Minor

15 credits required

Students complete the degree with selectives chosen in consultation with the program director, or any minor in consultation with the advisor.

Industrial Design

Introduction

The Bachelor of Fine Arts (BFA) in Industrial Design program prepares students for careers in the field of contemporary product design. UW-Stout industrial design graduates hold successful careers designing a wide array of products including medical devices, prosthetics and bicycles, as well as household and industrial products, tools and devices. The success of our students is derived from a program that highlights the intersections of fine art, design, history, sustainability and a strong liberal arts education.

The BFA in Industrial Design program provides a comprehensive applied learning environment that prepare graduates for a successful career in the field of contemporary product design. Industrial designers create and develop concepts and designs that optimize the function, value and appearance of products and systems for the mutual benefit of both user and manufacturer. As part of their program, students in the industrial design program are required to participate in a regional, national or international co-op or internship. UW-Stout also provides numerous opportunities to study abroad internationally.

A required mid-program benchmark portfolio review offers industrial design students an assessment of their progress in foundation art and design courses. Extensive library resources and the art and design department visual resource center are significant assets. A 2.5 grade point average and a 2.0 or better in art and design department courses is required to complete this degree. Students must present a portfolio of their work in the final two semesters of their program, as part of a public exhibition hosted by the School of Art and Design.

This UW-Stout degree is one of only two industrial design programs in Wisconsin and Minnesota, and is accredited by the National Association of Schools of Art and Design.

General Requirements

Bachelor of Fine Arts Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

Program Requirements

General Education

40 credits required

Communication Skills

9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

10 credits

Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

Arts and Humanities

6 credits

ARTH-223	Survey of Art – Ancient Through Medieval	3
PHOTO-130	Introduction to Still and Moving Image Photography.....	3

Social and Behavioral Sciences

6 credits

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues

3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning

3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives

3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

80 credits required

Studio and Related Requirements (47 credits)

ART-100	Drawing I	3
ART-101	Two-Dimensional Design Foundations	3
ART-103	Three-Dimensional Design Foundations	3
ART-200	Drawing II	3
ART-211	Contemporary Sculptural Practices I	3
DES-150	Introduction to Sustainable Design	2
DES-200	Design Concepts and Problems	3
DES-205	Design Drawing and Concept Visualization	3
DES-220	Introduction to 2D Digital Imaging	3
DES-231	Industrial Design I: Product Form and Visualization	3
DES-232	Industrial Design II: Ergonomics	3
DES-310	Graphic Design I	3
DES-331	Industrial Design III: Product Interface Design.....	3
DES-332	Industrial Design IV: Design for Manufacture	3
DES-431	System, Environment and Context	3
DES-432	Theory, Society and Application	3

Art Studio Selective Requirement (12 credits)

DES-XXX	Field Experience or Cooperative Education	2
---------	---	---

Select additional studio experiences from ART or DES courses. A minimum of 6 credits must have an ART prefix.

Art History Requirements (9 credits)

ARTH-224	Survey of Art: Renaissance – 20th Century	3
ARTH-319	History of Design	3
ARTH-XXX	Art History Selective	3

Technical Requirements (12 credits)

ENGGR-112	Principles of Engineering Drawing	3
ENGRR-266	3D Computer Modeling and Rendering or	
ENGGR-436	Computer Assisted Design Problems	3
MFGT-110	Materials and Manufacturing Processes	3
MFGT-202	Welding and Casting Processes or	
MFGT-204	Polymer Processes	3

Information and Communication Technologies

Introduction

Developed in response to place-bound professionals' need for additional education, the Bachelor of Science degree in Information and Communication Technologies is a degree completion collaborative effort between Wisconsin Technical Colleges and UW-Stout that provides flexibility for those that are place-bound or working full time. Since computers and the internet have continued to transform the global economy and society, the need for graduates with information and communication technologies skills has increased. The B.S. in Information and Communication Technologies offers a concentration in networking. The program offers a variety of distance education methods, opportunity to build on previously completed technical education, and preparation for management and leadership challenges. Students prepare for managerial and leadership opportunities, positioning them for new or changing opportunities in the workforce, increased salary potential and contribution to current employers. In addition, the program allows students to grow personally and professionally in their breadth and depth of knowledge of today's information technologies.

An A.A.S. or A.S degree in a field related to the major is desirable. To graduate from this program the student needs to complete a minimum of 32 credits from UW-Stout.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Technical Competency and/or Transfer	40 credits
Option 1: Professional Studies for degree with ICT Emphasis	40 credits
Option 2: Professional Studies for degree with Network Concentration	40 credits

Program Requirements

General Education

40 credits required

A. Communication Skills 8 Credits

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II	3
SPCOM-100	Fundamentals of Speech	2

B. Analytic Reasoning 6 Credits

MATH-118	Concepts of Mathematics (or higher)	4
----------	---	---

Remaining courses must be from areas including math, logic, statistics and computer science.

C. Health and Physical Education 2 Credits

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts 9 Credits

Courses must be from three or more areas including art history, creative arts, history, literature, music appreciation, performing arts and philosophy.

E. Social and Behavioral Sciences 9 Credits

Courses must be from three or more areas including anthropology, economics, geography, political science, psychology and sociology.

F. Natural Sciences (with Lab) 4 Credits

G. Technology 2 Credits

Technical Competency and/or Transfer

40 credits

TCS-XXX, CS-XXX, MEDIA-XXX, ELEC-XXX, GCM-XXX, TECH-XXX or adviser-approved credits for transfer.

Professional Studies

40 credits

Core Requirements 22 credits

BUACT-206	Introduction to Financial Accounting	3
BUINB-260	Introduction to International Business	3
BUMKG-330	Principles of Marketing	3
BUMGT-304	Principles of Management	3
ICT-401	Information Technology Policy and Audit	3
INMGT-100	Introduction to Management	1
INMGT-365	Project Management	3
INMGT-400	Organizational Leadership	3

Option 1: Degree with ICT Emphasis 18 credits

Choose 18 credits from the following selectives:

BUMKG-350	E-Business Strategy and Practice	3
ENGL-125	Professional Writing Elements of Style	3
ENGL-225	Editing Processes and Practices	3
ENGL-247	Critical Writing	3
ENGL-343	Rhetoric of Technology	3
ENGL-385	Document Design	3
ENGL-415	Technical Writing	3
ENGL-425	Usability Design and Testing	3
ICT-103	Information and Communication Technologies	3
ICT-305	Office Automation Technology	3
ICT-309	Collaborative Computing	3
ICT-311	Information and Communication Technologies Analytics	3
ITM-133	Networking Fundamentals I	3
ITM-134	Networking Fundamentals II	3
MEDIA-360	Introduction to Media in Education and Training	2
MEDIA-375	Web Production and Distribution	3
TECH-230	Exploring Technology	2

Option 2: Degree with Network Concentration 18 credits

ITM-133	Networking Fundamentals I	3
ITM-134	Networking Fundamentals II	3
ITM-441	Scalable Internetworks	3
ITM-442	Remote Access Networks	3
ITM-443	Multi-Layer Switched Networks	3
ITM-444	Internetwork Troubleshooting	3

Information Technology Management

Introduction

The Information Technology Management program prepares graduates for leadership positions in a dynamic environment. Professionals in the field deal with a broad range of business and technical issues. The program emphasizes managerial, technical and science skill courses. The field of information technology requires application of scientific, business and technical principles together with appropriate knowledge, and supports research, marketing, design, and systems that integrate information technology.

Students apply theory to solve real-world problems in an intensive hands-on laboratory environment that is the heart of UW-Stout's teaching strategy. Emphasis is on areas of information technologies that include voice, data, and video systems.

Technical courses foster the development of understanding in systems creation, design, development, implementation, operations and management. Students take courses that provide the basic knowledge about the technical elements required in building any voice, data, and video network systems. Students completing this program have the opportunity to earn one or more of the following highly respected professional certifications: Cisco CCNA, CCDA, CCNP, CCDP, and Microsoft MCSE.

Professional studies provide a solid managerial background while humanities and social science courses introduce students to methods of communications, motivation, and supervising people. Math and physical science courses help in solving technical and economic problems found in business.

Several work experience programs have been developed. Internships, field experience, independent study and cooperative education opportunities are available. You can work for a summer or semester earning college credit as well as a salary, while gaining a personal perspective of the business and technical world of information technologies.

Information Technology Management program graduates advance into administrative and executive areas within an organization. The professional certifications earned give students a substantial competitive advantage when entering the job market.

General Requirements

Bachelor of Science Degree

Total for graduation	120
General Education	40
Major Studies	80

Program Requirements

General Education

40 credits required

Communication Skills

9 Credits

ENGL-101	Composition I or	
ENGL-111	Freshman English — Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English — Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

12 Credits

CS-144	Computer Science I	4
MATH-153	Calculus I	4
PHYS-211	Introduction to Physics	3
PHYS-212	Introduction to Physics: Lab	1

Arts and Humanities

6 Credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

6 Credits

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues

3 credits

ICT-103	Information and Communication Technologies	3
---------	--	---

Social Responsibility and Ethical Reasoning

3 credits

ICT-215	Cyber Technology Ethics	3
---------	-------------------------------	---

Selective

1 credit

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

80 credits required

Management

20 credits

BUACT-206	Introduction to Financial Accounting	3
BUMGT-304	Principles of Management	3
ENGL-415	Technical Writing	3
INMG-365	Project Management	3
INMG-400	Organizational Leadership	3
INMG-475	Advanced Project Management	3
SPCOM-308	Speech Skills for Business and Industry	2

Technical

51 credits

CS-248	Web and Internet Programming	3
ELEC-204	Electricity/Electronic Fundamentals	3
ITM-133	Networking Fundamentals I	3
ITM-134	Networking Fundamentals II	3
ITM-330	IP Telephony Design and Implementation	3
ITM-361	Workstation and Server	3
ITM-362	Server Applications	3
ITM-363	Directory Services	3
ITM-382	Network Systems Design	3
ITM-383	Introduction to Network Security	3
ITM-391	Wireless Systems	3
ITM-441	Scalable Internetworks	3
ITM-443	Multi-Layer Switched Networks	3
ITM-444	Internetwork Troubleshooting	3
ITM-450	Enterprise Solutions and Unified Communications	3
ITM-484	Advanced Network Security and Auditing	3
ITM-490	ITM Capstone	3

Electives

9 credits

Electives may be chosen from any courses with the following prefixes: BUXXX, CS, ELEC, INMG, ICT, ITM, TRHRD, and STAT-320. ITM-449 Cooperative Education Experience is recommended. Minors and Specializations may require additional credits beyond program minimum.

Interior Design

Introduction

The Bachelor of Fine Arts (BFA) in Interior Design program prepares students for careers in interior design and related industries. Graduates of UW-Stout's program have careers in large corporations, architectural design firms as well as specialized interior design firms. The success of our students is derived from a program that highlights the intersections of fine art, design, history, sustainability and a strong liberal arts education.

Interior design courses integrate art, design and history to fully prepare interior design students to create meaningful, safe and life-enhancing interior environments that contribute to the cultural, social and environmental well-being of society. The technical courses in the engineering and construction departments are supported by industry standard software and hardware. Interior design students have the opportunity to study internationally and pursue internships at regional and national firms.

A required mid-program portfolio review offers students an assessment of their progress in foundation art and design courses. Extensive library resources and the art and design department visual resource center are significant assets. A 2.5 grade point average and a 2.0 or better in art and design courses are required for graduation.

General Requirements

Bachelor of Fine Arts Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

Program Requirements

General Education

40 credits required

Communication Skills

9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

10 credits

Courses must be from the areas of analytical reasoning and natural sciences. At least one mathematics or statistics course and one natural science course with a lab is required.

Arts and Humanities

6 credits

ARTH-223	Survey of Art: Ancient – Medieval	3
----------	---	---

Choose three additional credits from one or more areas including creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

6 credits

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues

3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning

3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives

3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

80 credits required

Studio and Related Requirements (47 credits)

ART-100	Drawing I	3
ART-101	Two-Dimensional Design Foundations	3
ART-103	Three-Dimensional Design Foundations	3
ART-200	Drawing II	3
DES-214	Interior Design Practice, Materials and Finishes	3
DES-200	Design Concepts and Problems	3
DES-205	Design Drawing and Concept Visualization	3
DES-220	Introduction to 2D Digital Imaging	3
DES-303	Interior Design Studio I	3
DES-304	Interior Design Studio II	3
DES-308	Lighting Design in the Build Environment	3
DES-314	Interior Specifications I	3
DES-414	Interior Design Construction Documentation	3
DES-415	Interior Design Studio III	3
DES-416	Interior Design Senior Studio	4
DES-XXX	Co-op or Field Experience	1

Art Studio Selective Requirements (12 credits)

DES-232	Industrial Design II: Ergonomics	3
DES-320	Interior Furniture Design	3

See adviser for approved course listing to complete the remaining 9 credits.

Art History Requirements (9 credits)

ARTH-224	Survey of Art: Renaissance – 20th Century	3
ARTH-319	History of Design	3
ARTH-333	History of Interiors and Furnishings	3

Technical Requirements (12 credits)

AEC-131	Architectural Graphics	3
AEC-171	Light Construction Methods and Materials	3
AEC-233	Architectural Design I	3
ENGGR-134	Computer-Assisted Design and Drafting	3

Management

Introduction

The Bachelor of Science in Management program recognizes the need for lifelong learning by providing a degree completion opportunity for technical college graduates. Developed in response to place-bound professionals' need for additional education, the program is a collaborative effort between the UW Colleges, Wisconsin Technical Colleges and UW-Stout.

The curriculum provides a sequence of management courses with concentrations in the management of business, industrial, service industries, quality and human resources allowing students the flexibility to choose the track that suits their personal and professional goals. Students prepare for managerial and leadership opportunities, building on previous technical education, positioning themselves for new or changing opportunities in the workforce, increasing salary potential and contribution to current employers, and growing personally and professionally in breadth and depth of knowledge.

The program is scheduled for working professionals through evening and online class offerings, using a variety of distance education methods.

An Associate of Applied Science or Associate of Science degree in a technical field is suggested. Students should possess two or more years of technical work experience.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Technical Emphasis	40 credits
Major Studies	22 credits
Concentration	18 credits

General Education

40 credits required

Communication Skills

9 Credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

10 Credits

STAT-130	Elementary Statistics.....	2
MATH-118	Concepts of Mathematics	4

Remaining courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

Arts and Humanities

6 Credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

6 Credits

ECON-201	General Economics or	
ECON-210	Principles of Economics I	3

Select remaining course(s) from another area including anthropology, geography, political science, psychology and sociology.

Contemporary Issues

3 Credits

Courses must be selected from the list of approved contemporary issues courses, which includes technology.

Social Responsibility and Ethical Reasoning

3 Credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives

2 Credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Technical Emphasis

40 credits required

Because each student brings different qualifications as a result of prior training and experience, the student, with the assistance of the program director, will define all 40 technical credits in terms of student and job competency needs.

Major Studies

22 credits required

Management Core		22 Credits
BUACT-206	Introduction to Financial Accounting	3
BUINB-260	Introduction to International Business	3
BUMGT-304	Principles of Management	3
ENGL-415	Technical Writing	3
INMGT-100	Introduction to Management	1
INMGT-200	Production and Operations Management <i>or</i>	3
INMGT-210	Service Operations Management	3
INMGT-325	Quality Management	3
INMGT-400	Organizational Leadership	3

Concentrations

18 credits required

Business Management		18 Credits
BUACT-207	Introduction – Corporate and Managerial Accounting	3
BUACT-340	Business Finance	3
BULGL-318	Business Law I	3
BUMGT-490	Strategic Management and Business Policy.....	3
BUMIS-333	MIS-Decision Support Systems	3
BUMKG-330	Principles of Marketing	3

Human Resource Management		18 Credits
INMGT-460	Management Capstone	3
PSYC-382	Human Resource Management	3
PSYC-403	Management of Employee Reward Systems	3
PSYC-485	Recruitment and Selection of Human Resources	3
RC-381	Occupational Safety/Loss Control	3
TRHRD-360	Training Systems in Business and Industry	3

Operations Management		18 Credits
INMGT-300	Engineering Economy	3
INMGT-305	Resource Planning and Materials Management	3
INMGT-320	Quality Tools	3
INMGT-365	Project Management	3
INMGT-460	Industrial Management Capstone	3
RC-381	Occupational Safety/Loss Control	3

Quality Management		18 Credits
INMGT-300	Engineering Economy	3
INMGT-320	Quality Tools	3
INMGT-365	Project Management	3
INMGT-410	Six Sigma Quality Improvement Methods	3
INMGT-420	Quality Assurance – Practicum	3
INMGT-440	Lean Enterprise	3

Manufacturing Engineering

Introduction

The Bachelor of Science degree program in Manufacturing Engineering is designed to prepare engineers as experts in the production process, from design through manufacturing. As a team member, the manufacturing engineer works with other professionals in the design of products, particularly from the point of view of the efficiency of production. They are responsible for selecting the right materials for various product applications and for determining methods used in processing raw materials into finished products. Using computers, they design and control automated systems capable of rapidly making the product. Manufacturing Engineers are part of the company's management team and make important decisions regarding production planning, inventory, scheduling and quality.

To be admitted to the B.S. in Manufacturing Engineering program, students must have graduated in the top 40 percent of their class or, for high schools that do not rank, have a cumulative grade point average of at least 3.0 on a 4.0 scale or receive a composite score of 22 or greater on the ACT or equivalent score or greater on the SAT (*ACT is preferred*). In addition, an ACT math score of at least 22 or equivalent score on the SAT is required.

Through intensive hands-on laboratory experience, which is the heart of UW-Stout's teaching strategy, the program emphasizes application of theory to solution of real world problems. Manufacturing Engineering students learn modern production tools, such as computer-aided design and manufacturing (CAD/CAM), robotics, programmable logic controllers, computer simulation of production environment and modern manufacturing management techniques. Students have opportunities to function as members of production teams as they practice concurrent product design, material selection, appropriate manufacturing method selection, and automated production systems design.

The UW-Stout Manufacturing Engineering degree is accredited by the Engineering Accreditation Commission of ABET. It is the only nationally accredited manufacturing engineering degree in Wisconsin. There are many opportunities for cooperative learning and internship experiences with regional companies, providing industrial experience and that extra "edge" when applying for jobs upon graduation.

General Requirements

Bachelor of Science Degree

Total for graduation	132
General Education	43
Major Studies	89

Program Requirements

General Education

43 credits required

A. Communication Skills

8 credits

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II	3
SPCOM-100	Fundamentals of Speech.....	2

B. Analytic Reasoning

8 credits

MATH-153	Calculus I	4
MATH-154	Calculus II	4

C. Health and Physical Education

2 credits

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts

9 credits

Courses must be from three or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

E. Social and Behavioral Sciences

9 credits

Courses must be from three or more areas including anthropology, economics, geography, political science, psychology and sociology.

F. Natural Sciences (with Lab)

5 credits

CHEM-135	College Chemistry I	5
----------	---------------------------	---

G. Technology

2 credits

Major Studies

89 credits required

Mathematics and Basic Sciences **20 credits**

CHEM-341	Chemistry of Materials	4
STAT-330	Probability and Statistics for Engineering and the Sciences	3
MATH-250	Differential Equations With Linear Algebra	3
PHYS-281	University Physics I.....	5
PHYS-282	University Physics II	5

Engineering Core **15 credits**

MECH-293	Engineering Mechanics	3
MECH-294	Mechanics of Materials	3
MFGE-150	Introduction to Engineering Materials	3
MFGE-275	Applied Thermodynamics and Heat Transfer	2
ELEC-290	Circuits and Devices	4

Materials and Manufacturing Processes **15 credits**

MFGE-251	Polymer and Composite Processes.....	3
MFGE-252	Material Removal and Forming Processes.....	3
MFGE-253	Joining and Casting Processes.....	3
MFGE-351	Manufacturing Process Engineering I.....	3
MFGE-352	Manufacturing Process Engineering II.....	3

Process, Assembly and Product Engineering **12 credits**

MFGE-441	Design of Fixtures, Jigs and Tooling	3
MFGE-405	Capstone I: Concurrent Design	3
ENGGR-112	Engineering Graphics Fundamentals	3
ENGGR-210	Engineering Graphics Using Solid Modeling	3

Manufacturing Integration Methods and System Design **17 credits**

MFGE-325	Computer Aided Manufacturing	3
MFGE-410	Capstone II: Manufacturing Systems Design	3
MFGE-415	Machine Vision and Robotics	2
MFGE-440	Design and Simulation of Manufacturing Systems	3
MFGE-363	Controls and Instrumentation	4
MECH-391	Fluid Mechanics	2

Manufacturing Competitiveness **9 credits**

INMGT-335	Lean Manufacturing Systems	4
INMGT-422	Quality Engineering	3
INMGT-300	Engineering Economy	2

Professional Selective **1 credit**

Select additional credit from list of approved professional courses.

Marketing and Business Education

Introduction

Are you creative and like to direct and plan activities for others? Are you interested in enhancing your knowledge and skills to better express your passion for marketing and business? UW-Stout's Marketing and Business Education program combines all of these interests into one program.

The disciplines of marketing and business contribute significantly to the intellectual and career development of students in an age of innovation and invention. Graduates of the program will be prepared to teach in middle, secondary and eventually post-secondary classrooms. Graduates are also prepared to enter careers in business and industry that expand on their real-world experience.

General Requirements

Bachelor of Science

Total for graduation	120 credits
General Education	40 credits
Major Studies	80-98 credits

Although it is not a requirement for graduation, students should be aware of the fact that they must acquire a minimum of 4,000 hours of occupational experience before they can be certified to teach Marketing in Wisconsin. Students enter the program with "pre-education" status. Earning a 2.75 or better grade point average and passing the Preprofessional Skills Test will formally move them into the Marketing Education program.

Note: Students are required to maintain a 2.75 grade point average throughout the marketing education program. Grade point of 2.0 (C) or better is required in each designated * course prior to student teaching.

Program Requirements

General Education

40 credits required

Communication Skills* 9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences 10 credits

MATH-120	Introduction to College Math (MATH-118 or higher).....	4
BIO-XXX	Biology Selective.....	4
PHYS-XXX	Physics Selective or	
CHEM-XXX	Chemistry Selective.....	2

Both Life and Physical Science courses (including one lab course) are required for teacher licensure.

Arts and Humanities 6 credits

LIT-XXX	Any Literature	3
---------	----------------------	---

Remaining course must be selected from areas including art history, creative arts, foreign language and culture, history, music appreciation, performing arts or philosophy.

Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: www.uwstout.edu/soe/current/ugbmi.cfm.

- ▶ Pass the Pre-Professional Skills Test (PPST)
- ▶ Attain a 2.75 cumulative grade point average
- ▶ Pass the required teacher background check
- ▶ Earn a grade of at least 2.00 (C) in ENGL-101 and ENGL-102 or ENGL-111 and ENGL-112.
- ▶ Earn a minimum grade of 2.00 (C) in SPCOM-100 Fundamentals of Speech.
- ▶ Complete EDUC-326 Foundations of Education
- ▶ Complete General Education Technology requirement
- ▶ Satisfactory rating on Benchmark I Portfolio Assessment rubric
- ▶ Satisfactory rating on Benchmark I Student Interview

Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: www.uwstout.edu/soe/current/ugbmii.cfm.

- ▶ Complete Application for Student Teaching form
- ▶ Maintain a 2.75 grade point average
- ▶ Pass Content Knowledge Exam (Praxis II)
- ▶ Receive clearance through an updated background check
- ▶ Complete a satisfactory tuberculosis (TB) test
- ▶ Receive satisfactory portfolio assessment by faculty
- ▶ Receive satisfactory rating on Benchmark II Student Interview
- ▶ Submit copies of resume to the School of Education prior to student teaching

Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: www.uwstout.edu/soe/current/ugbmiii.cfm.

- ▶ Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- ▶ Complete all program coursework
- ▶ Meet all program-specific requirements
- ▶ Student teach at two levels: Middle School and High School.
- ▶ Receive a satisfactory student teaching assessment

Social and Behavioral Sciences 6 credits

ECON-210 Principles of Economics I3

Remaining course must be selected from areas including anthropology, geography, political science, psychology or sociology.

Contemporary Issues 3 credits

ICT-103 Information and Communications Technology3

Social Responsibility and Ethical Reasoning 3 credits

EDUC-330 Multiculturalism3

Selective 3 credits

ECON-215 Principles of Economics II3

Major Studies

80-98 credits

Professional Education

Key: Business Administration Minor/Business Education Program ■
Counts towards ICT Minor ●
Marketing Education Program ▲

Marketing Education Licensure (46 credits)

Business Education Licensure (42 credits)

Marketing Education with Business Education Licensure (51 credits)

CTE-302 Principles of Career and Technical Education ▲.....2
CTE-360 Cooperative Occupational Education Programs ▲2
EDUC-303 Educational Psychology*.....3
EDUC-326 Foundations of Education*.....2
MBE-101 Introduction to Marketing and Business Education*.....3
MBE-202 Supervision of Marketing and Business Education3
Career and Technical Student Organizations* 3
MBE-301 Methods and Strategies for Teaching Marketing*..... 4
MBE-311 Marketing and Business Education Project Method* ▲.....2
MBE-312 MBE Pre-student Teaching.....1
MBE-401 Marketing Education Curriculum* ▲..... 2-3
MBE-409 Marketing Education-Student Teaching ▲..... 8-16
MBE-411 Business Education Methods and Curriculum* ■5
MBE-419 Business Education Student Teaching ■8
RDGED-382 Secondary Reading and Language*2
SPED-430 Inclusion*.....3

Related Technical Courses

Marketing Education Licensure (35 credits)

Business Education Licensure (38 credits)

Marketing Education with Business Education Licensure (51 credits)

BUACT-206 Introduction to Financial Accounting.....3
BUACT-207 Introduction – Corporate and Managerial Accounting3
BUINB-260 International Business or
BUINB-485 International Marketing.....3
BULGL-318 Business Law I.....3
BUMGT-304 Principles of Management.....3
BUMKG-330 Principles of Marketing3
BUMKG-334 Professional Selling and Market Development ▲3
BUMKG-370 Principles of Advertising ▲3
BUMKG-479 Marketing Research ▲3
ENGL-320 Business Writing3
FCSE-380 Consumer Economics ■3
ICT-303 Information and Communication Technologies Essentials ●■ 3
ICT-365 Integrated Software Applications for Instruction ■3
ICT-366 Integrated Media Applications for Instruction ■3
MBE-355 Marketing and Business Seminar 2-3
STAT-130 Elementary Statistics.....2

Packaging

Introduction

A packaging career today requires a thorough knowledge of materials, methods, design concepts, and machinery to develop and produce the packages that protect and preserve a product, help market the product and instruct the consumer in its proper use.

UW-Stout's Bachelor of Science degree program in Packaging prepares students for technical or management responsibilities in the packaging industry to meet these needs. The program places strong emphasis on the application of theory to strengthen problem solving abilities and challenges students by providing opportunities to solve "real" packaging industry problems in classroom/laboratory settings.

The trend in the packaging industry is to hire employees who can function in more than one area at career entry. UW-Stout's Packaging program recognizes this trend by offering the student several "emphasis" options which include course and laboratory work beyond the technical core of the program. This distinguishing feature allows students to draw on other well-recognized programs offered at UW-Stout: graphic arts, graphic design, food science, business and sales, quality and manufacturing, and packaging research and development.

With the quantity and variety of products produced in the world, it is easy to understand that packaging is a dynamic multibillion dollar industry in need of well-educated men and women. Graduates of the program are positioned advantageously for entry into the expanding and evolving packaging industry, as well as for further studies in the field of packaging.

General Requirements

Bachelor of Science Degree

Total for graduation.....	120
General Education	43
Major Studies	62
Emphasis Area	15

Program Requirements

General Education

43 credits required

Communication Skills

9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English-Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English-Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

11 credits

CHEM-135	College Chemistry I	5
MATH-153	Calculus I	4
STAT-130	Elementary Statistics.....	2

Arts and Humanities

6 credits

ART-101	Two-Dimensional Design	3
<i>Choose 3 additional credits from one or more areas including art history, foreign language and culture, history, literature, music appreciation and philosophy.</i>		

Social and Behavioral Sciences

6 credits

ECON-201	General Economics or	
ECON-210	Principles of Economics I	3
<i>Choose 3 additional credits from one or more areas including anthropology, geography, political science, psychology and sociology.</i>		

Contemporary Issues

3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning

3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives

5 credits

PHYS-241	College Physics I or	
PHYS-281	University Physics I.....	5

Major Studies

62 credits required

CMG-141	Cross-Media Graphics.....	3
ENGGR-112	Engineering Graphics Fundamentals	3
ENGGR-210	Solid Modeling	3
MFGT-251	Fundamentals of Plastics Materials and Processing.....	3
PKG-150	Packaging Fundamentals	3
PKG-210	Packaging Materials: Paper, Wood, Adhesives, and Metal.....	3
PKG-220	Packaging Materials: Polymers and Glass.....	3
PKG-250	Consumer Packaging Systems.....	3
PKG-260	Distribution Packaging	3
PKG-335	Packaging Machinery	3
PKG-350	Packaging Design and Evaluation.....	3
PKG-385	Medical Packaging.....	3
PKG-490	Packaging Development	3
PKG-495	Packaging Seminar.....	2
PKG-X49	Cooperative Education Experience	3

Professional/Management

18 credits

ENGL-415	Technical Writing	3
INMGT-200	Production/Operations Management.....	3
INMGT-300	Engineering Economy.....	3
INMGT-325	Quality Management.....	3
INMGT-365	Project Management.....	3
INMGT-400	Organizational Leadership.....	3

Emphasis Area

15 credits required

Select 15 credits from an emphasis area. See program director or adviser for approved emphasis areas and course listings. Course plan must be approved by Packaging program director. Current emphasis areas available include:

- Art Minor (Must apply through the School of Art and Design.)
- Business Administration Minor
- Food Technology
- International Studies
- Package Design, Research and Development
- Package Printing
- Packaging Machinery
- Plastics
- Project Management
- Quality Management Minor
- Supply Chain Management
- Sustainable Design and the Environment

Plastics Engineering

Introduction

The Bachelor of Science degree in Plastics Engineering is designed to prepare engineers as experts in the design and manufacturing of plastic components. Plastics engineers work with other professionals in the design of products, particularly to ensure efficiency and quality when manufacturing. First class testing and processing facilities allow plastics engineering students to learn how to setup, optimize and validate processes to meet high quality standards. Plastics engineers also work to design and program automated systems capable of manufacturing and assembling plastic products. Through advanced knowledge of plastics materials, engineering design rules, and computer simulation software, plastics engineers play a vital role in automotive and recreational vehicle components, medical devices, consumer electronics, and everything else made of plastic.

To be admitted to the program, students must have graduated in the top 40 percent of their class or, for high schools that do not rank, have a cumulative grade point average of at least 3.0 on a 4.0 scale, or receive a composite score of 22 or greater on the ACT or equivalent score or greater on the SAT (*ACT is preferred*). In addition, an ACT math score of at least 22 or equivalent score on the SAT is required.

UW-Stout's Plastics Engineering degree is accredited by the Engineering Accreditation Commission of ABET (*Accreditation Board for Engineering and Technology*). It is the only nationally accredited plastics engineering degree in the Midwest, and one of only two in the United States. Many opportunities exist for paid cooperative experience with local and regional companies, as well as national and international companies. These experiences are extremely beneficial when applying for full-time engineering positions, and are an essential component to the undergraduate plastics engineering experience at UW-Stout.

General Requirements

Bachelor of Science Degree

Total for graduation	129
General Education	40
Major Studies	89

Program Requirements

General Education

40 credits required

Communication Skills	9 credits
ENGL-101 Composition I or	
ENGL-111 Freshman English – Honors I	3
ENGL-102 Composition II or	
ENGL-112 Freshman English – Honors II or	
ENGL-113 Honors Seminar I	3
SPCOM-100 Fundamentals of Speech	3

Analytic Reasoning and Natural Science	13 credits
CHEM-135 College Chemistry	5
MATH-153 Calculus I	4
MATH-154 Calculus II	4

Humanities and Arts

6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

6 credits

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues

3 credits

Courses must be from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning

3 credits

Courses must be from the list of approved social responsibility and ethical reasoning courses.

Major Studies

89 credits required

Mathematics and Basic Sciences

21 credits

CHEM-325 Chemistry of Polymers	4
MATH-250 Differential Equations With Linear Algebra	3
PHYS-333 Dynamics	3
PHYS-XXX Engineering Physics	5
PHYS-291 Statics	3
STAT-330 Probability and Statistics for Engineering and the Sciences	3

Engineering Core

17 credits

ELEC-290 Circuits and Devices	4
MECH-294 Mechanics of Materials	3
MFGT-150 Introduction to Engineering Materials	3
MFGE-275 Thermodynamics and Heat Transfer	3
MFGE-391 Fluid Mechanics	3
PLE-349 Intern Experience	1-3

Polymer/Plastic Materials, Processes, Analysis and Testing

21 credits

MFGT-250 Introduction to Plastics	3
MFGT-341 Injection Molding Technology	3
PLE-305 Extrusion Theory and Application	3
PLE-310 Injection Molding Theory, Design and Application	3
PLE-340 Process Simulation and Analysis	3
PLE-360 Testing and Analysis of Plastics	3
PLE-420 Transport Phenomena for Plastics Engineers	3

Product and Production System Design

21 credits

ENGGR-112 Engineering Graphics Fundamentals	3
ENGGR-210 Engineering Graphics Using Solid Modeling	3
MFGE-325 Computer Aided Manufacturing	3
MFGE-363 Controls and Instrumentation	4
MFGE-415 Machine Vision and Robotics	2
PLE-405 Capstone I: Process/Product Design	3
PLE-410 Capstone II: Process/Product Development.....	3

Engineering and Professional Competitiveness

9 credits

INMG-300 Engineering Economy	2
INMG-335 Lean Manufacturing Systems	4
INMG-422 Quality Engineering.....	3

Professional Communication and Emerging Media

Introduction

Professional Communication and Emerging Media is a rapidly growing profession. Development of new technologies has increased the demand for professionals who can clearly explain policies, products and services to clients and customers. UW-Stout's program integrates communication theory with coursework in a chosen applied field. Examples of applied fields include biomedical engineering, packaging, international studies, quality management, telecommunications, tourism, training and development, art and design, and business and management. Graduates of this program will have the skills to research, visualize, design, develop and oversee publication of both print and electronic documents.

Copy editing and preparation, multimedia or hypertext writing, and critical, technical and freelance writing courses prepare you to write clearly for specific audiences. In addition, courses in an applied field of your choice supply the strong technical background crucial to communicating complex ideas to different audiences. Elective courses give you the chance to explore other areas, such as photography or creative writing. All students will participate in a co-op, internship or practicum during the junior year.

General Requirements

Bachelor of Science Degree

Total for graduation	124 credits
General Education	43 credits
Major Studies	81 credits

Program Requirements

General Education

43 credits required

A. Communication Skills **8 credits**

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar	3
SPCOM-100	Fundamentals of Speech.....	2

B. Analytic Reasoning **6 credits**

Courses must be from areas of math, logic, statistics and computer science.

C. Health and Physical Education **2 credits**

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts **9 credits**

Courses must be from three or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

E. Social and Behavioral Sciences **9 credits**

Courses must be from three or more areas including anthropology, economics, geography, political science, psychology and sociology.

F. Natural Sciences (with Lab) **4 credits**

G. Technology **2 credits**

H. General Education Electives **3 credits**

Course(s) must come from categories A, B, D, E or F.

Major Studies

60 credits required

ENGL-121	Introduction to Technical Communication.....	3
ENGL-125	Elements of Style for Professional Writers	3
ENGL-225	Editing Practices and Processes	3
ENGL-247	Critical Writing	3
ENGL-312	International Technical Communication	3
ENGL-340	Structure of English	3
ENGL-371	Rhetoric and Style: Strategies of Argumentation.....	3
ENGL-385	Document Design.....	3
ENGL-388	Writing for the Internet.....	3
ENGL-415	Technical Writing	3
PHIL-235	General Ethics	3
SPCOM-312	Intercultural Communication.....	2
XXX-XXX	Foreign Language I.....	4
XXX-XXX	Foreign Language II.....	4

Concentration

21 credits

Technical Communication **21 credits**

ENGL-349	Co-operative Educational Experience or	
ENGL-437	Technical Writing Practicum	1
ENGL-425	Usability Design Testing.....	3
ENGL-435	Writing for Content Management.....	3
ENGL-471	Technical Communication and Consulting.....	3
INMG-365	Project Management	3
SPCOM-414	Interviewing	1
SPCOM-425	Informational Interviewing Skills for Professionals	1
GCM-141	Graphic Communication	3

Applied Journalism **21 credits**

ENGL-207	Writing for the Media	3
ENGL-210	Journalism Practicum	1
ENGL-218	Mass Communication	3
ENGL-330	Feature Writing.....	3
ENGL-407	Seminar in Applied Journalism.....	3
ENGL-471	Technical Communication and Consulting.....	3
GCM-141	Graphic Communication	3
MEDIA-204	Introduction to Photography	2

Digital Humanities **21 credits**

CS-144	Computer Science.....	3
CS-248	Web and Internet Programming.....	3
LOG-301	Logic.....	3
ENGL-335	Critical Approaches to Digital Humanities	3
ENGL-480	Seminar in the Digital Humanities	3
ENGL-495	Digital Humanities.....	6

Psychology

Introduction

The discipline of Psychology is the systematic study of thought, emotions and behavior of human beings. The B.S. in Psychology at UW-Stout has, as an overriding goal, a focus on application of theories, methods and concepts for the improved condition of people in a variety of environments. The program has been designed to adhere to the American Psychological Association standards for undergraduate education that emphasizes the scientific aspects of the profession as well as the liberal arts goals of Psychology. Students acquire competencies that lead to employment wherever psychology is applied in education institutions, public and private agencies, business and industry. In addition to the major study, all students are expected to develop literacy in the arts, humanities, natural sciences and social sciences. Each student is also expected to develop and demonstrate effective communication and quantitative skills as a part of the program's requirements.

Students are guided and assisted in developing a personal program plan centered on their individual needs and career goals. With careful planning, students may include self-planned concentrations with a more focused emphasis in one of a variety of unique career paths in psychology. Students entering the program should realize that they may need to obtain graduate level education or other advanced training for certain careers as practicing professional psychologists.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	46-55 credits
Minor or second area of depth	13-22 credits
Additional Liberal Studies Requirement.....	6 credits
Electives.....	6 credits

Students must attain a minimum grade point average of 2.25 in required courses for the major and a minimum grade point average of 2.5 in other courses for the major.

Program Requirements

General Education

40 credits required

Communication Skills

9 credits

ENGL-101 Composition I or	
ENGL-111 Freshman English – Honors I.....	3
ENGL-102 Composition II or	
ENGL-112 Freshman English – Honors II or	
ENGL-113 Honors Seminar I	3
SPCOM-100 Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

10 credits

MATH-120 Introductory College Mathematics I (or more advanced)	4
STAT-130 Elementary Statistics (or more advanced)	2
XXX-XXX Any Natural Science with Lab	4

Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

Arts and Humanities

6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

6 credits

PSYC-110 General Psychology 3
Select remaining courses from another area including anthropology, economics, geography, political science and sociology.

Contemporary Issues

3 credits

Courses must be selected from the list of approved contemporary issues courses, which includes technology.

Social Responsibility and Ethical Reasoning

3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives

3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

46-55 credits required

Required Courses

13 credits

PSYC-100 Psychology Seminar I – Foundations	2
PSYC-190 Psychological Research Methods.....	4
PSYC-290 Interpreting Psychological Research.....	3
PSYC-300 Psychology Seminar II – Career Preparation	1
PSYC-320 Psychology: Its History and Systems.....	3

Psychology Domains

12 credits

Select at least one course from each domain:

Learning and Cognition

COG-101 Cognitive Science	4
PSYC-330 Psychology of Learning	3
PSYC-442 Cognitive Processes	3
PSYC-451 Children's Learning.....	3

Personality and Social Processes

PSYC-270 Social Cognition and Behavior	3
PSYC-340 Psychology of Individual and Group Differences	3
PSYC-360 Personality Theories and Applications	3
PSYC-470 Social Influence	3

Biological Bases

COGS-101 Cognitive Science I	4
PSYC-333 Drugs and the Brain	3
PSYC-391 Applied Psychophysiological Methods	3
PSYC-432 Perception	3

Developmental

PSYC-251 Child Psychology	3
PSYC-351 Children's Social Reasoning	3
PSYC-352 Adolescent Psychology.....	3

Applied **6 credits**

Select 6 credits from the following:

COUN-405	Introduction to Basic Counseling Skills	3
PSYC-120	Psychology of Adjustment	3
PSYC-280	Forensic Psychology, Law and Ethics	3
PSYC-281	Psychology for Sustainability	3
PSYC-350	Culture and Psychology	3
PSYC-355	Clinical and Counseling Psychology	3
PSYC-361	Abnormal Psychology	3
PSYC-370	Interpersonal Effectiveness	2
PSYC-371	Introduction to Health Psychology	3
PSYC-377	Consumer Psychology	3
PSYC-381	Industrial/Organizational Psychology	3
PSYC-382	Human Resource Management	3
PSYC-403	Management of Employee Reward Systems	3
PSYC-485	Recruitment and Selection of Human Resources	3

Experiential/Capstone **6 credits**

Select 6 credits from the following:

PSYC-X49	Cooperative Education Experience in Psychology.....	1-8
PSYC-X98	Psychology Field Experience	2
PSYC-390	Experimental Psychology	4
PSYC-480	Individual Research Project I and	
PSYC-481	Individual Research Project II	2
PSYC-X99	Independent Study**	2-3

**Must involve research and be approved by the advisor as meeting the requirement of this category.

Psychology Selectives

See adviser for a list of approved selectives to fulfill the 120-credit requirement.

Minor or Second Area of Depth**13-22 credits required**

Students are expected to take a minor, specialization or self-planned concentration. The self-planned concentration allows students to select course work and learning experiences that relate to a particular area of interest, and must be planned with an adviser and approved by a committee of at least three persons designated by the Psychology Program Committee.

Additional Liberal Studies Requirements**6 credits required**

XXX-XXX	Any natural science	3
XXX-XXX	Any approved writing courses	3

Electives**6 credits required**

Select courses from major studies: psychology domains, applied or experiential/capstone.

Real Estate Property Management

Introduction

The B.S. in Real Estate Property Management provides a comprehensive and challenging academic experience that prepares graduates to be leaders in the property management profession. Property management is the administration, operation, marketing, and maintenance of real property in order to achieve the objectives of the property's owner. Property managers are in a service business and work closely with both the owners of the properties they manage and the tenants and residents who reside and work within these properties.

The field of property management is growing steadily because of three concurrent trends: (1) the simultaneous growth of the population and its requirements for space has increased the total number of all types of buildings, (2) a larger percentage of real estate is considered investment property and (3) there is increasingly wide acceptance of the fact that real estate management requires special training and education.

There is a growing sophistication and professionalism in the management of both residential and commercial property. A professional property manager has to possess a diverse skill set in the areas of finance, accounting, tenant and employee relations and laws affecting these properties. The degree program is designed to prepare students for this by drawing widely from courses in the disciplines of business, management, construction, service management, retail and hospitality.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Core Requirements	61 credits
Concentration	19 credits

Program Requirements

General Education

40 credits required

Communication Skills	9 credits
ENGL-101 Composition I or	
ENGL-111 Freshman English – Honors I	3
ENGL-102 Composition II or	
ENGL-112 Freshman English – Honors II or	
ENGL-113 Honors Seminar I	3
SPCOM-100 Fundamentals of Speech	3
Analytic Reasoning and Natural Sciences	10 credits
BIO-111 Science, Society and the Environment	4
MATH-120 Introductory College Mathematics or higher	4
STAT-130 Elementary Statistics	2

Arts and Humanities

6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences	6 credits
ECON-210 Principles of Economics	3
PSYC-110 General Psychology	3

Contemporary Issues	3 credits
ANTH-310 Latinos in the U.S.	3

Social Responsibility and Ethical Reasoning	3 credits
AEC-191 The Built Environment	3

Selectives

3

Courses/credits may be selected from any category to meet the 40-credit requirement.

Core Requirements

61 credits required

Overview	14 credits
BULGL-365 Principles of Real Estate	3
BUMKG-330 Principles of Marketing or	
HT-344 Hospitality and Tourism Marketing and Sales	3
ENGL-320 Business Writing	3
PM-100 Introduction to Property Management	2
PSYC-382 Human Resource Management	3

Property Management	19 credits
INMGT-450 Maintenance Management	3
PM-280 Hospitality Facilities Management	3
PM-370 Principles of Property Management	3
PM-371 Commercial/Residential Property Development and Management	3
PM-381 Marketing and Leasing Residential and Commercial Property	3
PM-470 Seminar in Property Management	4

Finance	9 credits
BUACT-206 Introduction to Financial Accounting	3
BUACT-207 Introduction to Corporate and Managerial Accounting	3
PM-362 Real Estate Market/Investment Analysis	3

Law and Ethics	6 credits
BULGL-430 Real Estate Law	3
PM-358 Ethical Decision Making in Property Management	3

Management	9 credits
INMGT-400 Organizational Leadership	3
HT-454 Security and Risk Mgmt. for the Hospitality Industry	3
HT-457 Hospitality Management Strategies or	
BUMGT-490 Strategic Management and Business Policy	3

Workplace	4 credits
HT-452 Hospitality Professionalism	2
PM-449 Property Management Coop/Internship	2

Concentrations

19 credits

Students may choose from a list of approved selectives or complete a concentration.

Construction

18 Credits

AEC-131	Architectural Graphics.....	3
AEC-171	Light Construction Methods and Materials	3
AEC-190	Orientation to the Construction Industry.....	3
AEC-237	Architectural Technology.....	3
AEC-352	Building Mechanical Systems	3
AEC-370	Construction Estimating.....	3

Choose additional courses from an approved list to fulfill the 120 credit requirement.

Hotel, Restaurant, Tourism Management

18 Credits

HT-235	Lodging Systems	3
HT-330	Resort Planning and Operations	3
HT-335	Lodging Operations Management	3
HT-374	Principles of Timeshare Management	3
HT-383	Yield Management	3
HT-430	Lodging Administration	3

Choose additional courses from an approved list to fulfill the 120 credit requirement.

Business Retail

19 Credits

BURTL-105	Introduction to Retail Merchandising and Management	1
BURTL-127	Basic Merchandising	3
BURTL-212	Trend Tracking and Forecasting	3
BURTL-390	Merchandise Planning and Control.....	4
BURTL-327	Store Management.....	3
BURTL-329	Retail Promotions.....	3
BURTL-425	Current Retail Strategies for a Differential Advantage	2

Retail Merchandising and Management

Introduction

The Retail Merchandising and Management program is designed to prepare graduates for leadership roles in corporate, regional or store-level management positions in the retail industry and support areas. Students explore the functional areas of retailing, including marketing, promotions, human resources, accounting, buying, merchandising, sourcing and logistics. They also sharpen their skills in analytical reasoning, critical thinking, problem-solving, oral and written communications. A minor in Business Administration can also be earned within the program requirements. A highlight of the program is the senior-level retail practicum or co-op/internship in which students work in management-level positions in retailing. Numerous opportunities are available for travel and study abroad experiences to enhance the educational programming.

Graduates of this program are prepared for entry-level managerial positions in merchandise buying, planning and management; store management and operations; training; human resources and e-commerce. Although specific job titles vary by organization, graduates of the program have been recruited to fill such positions as business analyst, executive team lead, sourcing specialist, department manager, assistant store manager, manager trainee, assistant buyer, pricing analyst, unit development leader, retail operations manager and visual merchandising/space management planner.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Professional Studies	40-41 credits
Concentration	39-40 credits

Program Requirements

General Education

40 credits required

Communication Skills

9 Credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences

10 Credits

At least one mathematics or statistics course and a natural science course with a lab are required. MATH-123 required for Buying concentration. MATH 120, 121, or 123 required for Store Operations Management Concentration. STAT-130 recommended prerequisite for BUMKG-479 Marketing Research.

Arts and Humanities

6 Credits

Courses must be from two different areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences

6 Credits

ECON-210	Principles of Economics I	3
GEOG-104	World Geography (Required for Buying Concentration)	3

Other concentrations choose 3 additional credits from areas including anthropology, geography, political science, psychology and sociology.

Contemporary Issues

3 credits

Courses must be selected from the list of approved contemporary issues courses. ICT-103 required for Buying concentration.

Social Responsibility and Ethical Reasoning

3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives

3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Professional Studies

40-41 credits required

Students must complete 500 hours of approved and verified retail work experience (with a minimum of 250 hours with any one company) before completing the senior year. Overall 2.0 GPA required for graduation. Required and Selective courses cannot be taken for credit/no credit. BURL-449 Retail Co-op cannot be taken during last session/term before graduation.

BUACT-206	Introduction to Financial Accounting	3
BUMGT-304	Principles of Management.....	3
BUMKG-330	Principles of Marketing	3
BURL-105	Introduction to Retail Merchandising and Management	1
BURL-127	Basic Merchandising	3
BURL-329	Retail Promotions.....	3
BURL-390	Merchandise Planning and Control.....	4
BURL-425	Current Retail Strategies.....	2
BUSCM-338	Principles of Logistics.....	3
ECON-215	Principles of Economics II	3

Writing Selective 3 credits

Select one course:

ENGL-320	Business Writing	3
ENGL-415	Technical Writing	3

Senior Capstone Selective 3-4 credits

Select both practicum courses or the co-op experience.

BURL-450	Retail Practicum I and	
BURL-451	Retail Practicum II	4
BURL-449	Cooperative Education Experience	3-4

Advanced Marketing Selective 3 credits

Select one course:

BUMKG-350	E-Business Strategy and Practice	3
BUMKG-385	Target Marketing	3
BUMKG-479	Marketing Research	3

International Selective 3 credits

Select one course:

BUINB-260	Introduction to International Business (required for Buying Concentration)	3
BUINB-367	International Management (required for HRM Concentration)	3
BUINB-485	International Marketing.....	3
BURL-319	International Economic Trends in Textiles and Clothing.....	3

Concentrations

39-40 credits required

Buying and Product Management 39-40 credits

APRL-140	Textiles.....	3
APRL-202	Quality Analysis of Sewn Products	3
BUACT-207	Managerial Accounting.....	3
BUMIS-333	Management Information Systems	3
BURL-212	Trend Forecasting	3
BURL-395	Assortment Planning	3
BURL-490	Advanced Merchandise Plan Control	3

Select one course (3 credits) from each of the following areas:

Management Selective:

BURL-327	Store Management.....	3
INMGT-400	Organizational Leadership.....	3
PSYC-382	Human Resource Management.....	3

Problem-Solving Selective:

ENGL-247	Critical Writing.....	3
LOG-250	Critical Thinking.....	3
LOG-301	Introduction to Logical Thinking	3

Product Management Selective:

APRL-250	Textile Evaluation	3
ICT-311	Information and Communication Technologies Analytics	3

Sourcing Selective:

BUSCM-437	Procurement, Sourcing and Supply Chain Management	3
BURL-319	International Economic Trends in Textiles and Clothing	3
INMGT-305	Resource Planning and Materials Management.....	3

Electives (6-7 credits)

See adviser for list of approved courses.

Fashion Marketing 39-40 credits

APRL-140	Textiles.....	3
APRL-202	Quality Analysis of Sewn Products	3
BURTL-212	Trend Tracking and Forecasting	3
BURTL-327	Store Management.....	3
BURTL-229	Visual Merchandising	3
BURTL-417	Social and Psychological Aspects of Clothing.....	3
PSYC-382	Human Resource Management.....	3

Select one course (2-4 credits) from each of the following areas:

Spanish Selective:

SPAN-121	Practical Spanish I	2
SPAN-122	Practical Spanish II.....	2
SPAN-103	Elementary Spanish I.....	4
SPAN-104	Elementary Spanish II.....	4
SPAN-XXX	Other SPAN course with approval.	

Diversity Selective:

INMGT-415	Inclusivity in Leadership.....	3
PSYC-340	Psychology of Individual and Group Differences	3
PSYC-372	Psychology of Sex and Gender.....	3
SOC-275	Sociology of Gender Roles	3
SOC-375	Sociology of Minority Groups	3
SPCOM-312	Intercultural Communications	2
XXX-XXX	Other diversity course with approval.	

Leadership Selective:

TRHRD-360	Training Systems in Business and Industry.....	3
INMGT-400	Organizational Leadership.....	3
INMGT-430	Employee Involvement Work Teams.....	2
INMGT-416	People Process Culture.....	3
MSL-101	Foundations of Officership	1
MSL-102	Basic Leadership	1
XXX-XXX	Other leadership course with approval.	

Electives (8-13 credits)

BUACT-207 Intro to Corporate and Managerial Accounting is suggested for Business Minor requirement completion.

Human Resource Management 39-40 credits

BURTL-327	Store Management.....	3
INMGT-400	Organizational Leadership.....	3
PSYC-379	Public Relations	2
PSYC-382	Human Resource Management.....	3
PSYC-403	Employee Reward Systems	3
PSYC-485	Recruitment and Selection of Human Resources	3
SPCOM-414	Interviewing	1
TRHRD-360	Training Systems in Business and Industry.....	3

Select one course (2-4 credits) from each of the following areas:

Spanish Selective:

SPAN-121	Practical Spanish I	2
SPAN-122	Practical Spanish II.....	2
SPAN-103	Elementary Spanish I.....	4
SPAN-104	Elementary Spanish II.....	4
SPAN-XXX	Other SPAN course with approval.	

Diversity Selective:

INMGT-415	Inclusivity in Leadership.....	3
PSYC-340	Psychology of Individual and Group Differences	3
PSYC-372	Psychology of Sex and Gender.....	3
SOC-275	Sociology of Gender Roles	3
SOC-375	Sociology of Minority Groups	3
SPCOM-312	Intercultural Communications	2
XXX-XXX	Other diversity course with approval.	

Leadership selective:

INMGT-416	People Process Culture.....	3
INMGT-430	Employee Involvement Work Teams.....	2
MSL-101	Foundations of Officership	1
MSL-102	Basic Leadership	1
XXX-XXX	Other leadership course with approval.	

Electives (8-13 credits)

BUACT-207 Introduction to Corporate and Managerial Accounting is suggested for to complete a Business Minor. An experiential course is suggested to complete a Human Resource Management Minor.

Store Operations Management 39-40 credits

BUACT-207	Managerial Accounting.....	3
BUMIS-333	Management Information Systems	3
BURTL-229	Visual Merchandising	3
BURTL-327	Store Management.....	3
INMGT-400	Organizational Leadership.....	3
PSYC-382	Human Resource Management.....	3
SPCOM-414	Interviewing	1

Select one course (2-4 credits) from each of the following areas:

Spanish Selective:

SPAN-121	Practical Spanish I	2
SPAN-122	Practical Spanish II.....	2
SPAN-103	Elementary Spanish I.....	4
SPAN-104	Elementary Spanish II.....	4
SPAN-XXX	Other SPAN course with approval.	

Diversity Selective:

INMGT-415	Inclusivity in Leadership.....	3
PSYC-340	Psychology of Individual and Group Differences	3
PSYC-372	Psychology of Sex and Gender.....	3
SOC-275	Sociology of Gender Roles	3
SOC-375	Sociology of Minority Groups	3
SPCOM-312	Intercultural Communications	2
XXX-XXX	Other diversity course with approval.	

Leadership Selective:

TRHRD-360	Training Systems in Business and Industry.....	3
INMGT-430	Employee Involvement Work Teams.....	2
INMGT-416	People Process Culture.....	3
MSL-101	Foundations of Officership	1
MSL-102	Basic Leadership	1
XXX-XXX	Other leadership course with approval.	

Problem-Solving Selective:

ENGL-247	Critical Writing.....	3
LOG-250	Critical Thinking.....	3
LOG-301	Introduction to Logical Thinking	3

Electives (7-10 credits)

See adviser for list of approved courses.

Science Education

Introduction

The B.S. in Science Education program at UW-Stout prepares students for a career in teaching science at the middle school and secondary levels. To complete the program, students are required to take general education courses, science courses, professional education courses, and several field experiences.

Students choose a science teaching major certification in broadfield science, biology, chemistry, or physics and a science teaching minor certification in biology, chemistry, or physics. The science teaching major certifications require 28 credits of science, and the science teaching minor certifications require 18 credits of science. These courses include required and elective science courses to provide students with flexibility in pursuing a wide variety of courses in each science discipline.

The broadfield science major certification includes courses in biology, chemistry, physics, and earth science. It certifies teachers to teach any science course from grades five through ten. To teach eleventh and twelfth grade courses in biology, chemistry, or physics, science teachers must be certified in those specific subject areas with either a major or minor certification. The broadfield science major certification is recommended for those teachers most interested in teaching at the middle school level. It can also be advantageous at very small high schools where science teachers teach many different science courses.

Science teaching is a highly rewarding career that is also a high demand profession. For a successful career in science teaching, you should have an aptitude for helping others and a love of science. According to the National Education Association (NEA) and Wisconsin Department of Public Instruction (DPI), there is currently a national and state wide shortage of science teachers. Completing a BS in Science Education degree at UW-Stout will lead to a rewarding career and valuable contribution to individuals and society.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

Program Requirements

General Education

40 credits required

Communication Skills	9 Credits
ENGL-101 Composition 1 or	
ENGL-111 Freshman English – Honors I.....	3
ENGL-102 Composition 2 or	
ENGL-112 Freshman English – Honors II or	
ENGL-113 Honors Seminar I or	
SPCOM-100 Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences	10 Credits
MATH-153 Calculus I	4
STAT-320 Statistical Methods	3
XXXX-XXX Any physical science (PHYS, CHEM)	3

Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: www.uwstout.edu/soe/current/ugbmi.cfm.

- ▶ Pass one of the following skills tests: PPST, CORE, ACT, SAT or GRE. Test scores and test completion dates must meet required specifications as detailed on the SOE web page listed above
- ▶ Pass the required teacher background check
- ▶ Earn a grade of at least 2.00 (C) in ENGL-101 or ENGL-102 or ENGL-111 and ENGL-112
- ▶ Earn a grade of at least 2.00 (C) in SPCOM-100
- ▶ Earn a minimum grade of 2.00 (C) in STEMED-101 Introduction to Math and Science Education course
- ▶ Complete EDUC-326 Foundations of Education.
- ▶ Satisfactorily complete Benchmark I Review

Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: www.uwstout.edu/soe/current/benchmarks.cfm.

- ▶ Complete Application for Student Teaching form
- ▶ Maintain a 2.75 grade point average
- ▶ Pass Content Knowledge Exam (*Praxis II*)
- ▶ Receive clearance through an updated background check
- ▶ Complete a satisfactory tuberculosis (TB) test
- ▶ Receive satisfactory portfolio assessment by faculty
- ▶ Receive satisfactory rating on Benchmark II Student Interview
- ▶ Submit copies of resume to the School of Education prior to student teaching

Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: www.uwstout.edu/soe/current/benchmarks.cfm.

- ▶ Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- ▶ Complete all program coursework
- ▶ Meet all program-specific requirements
- ▶ Student teach at two levels: Middle School and High School.
- ▶ Receive a satisfactory student teaching assessment

Arts and Humanities 6 Credits

LIT-XXX	Any Literature.....	3
XXX-XXX	Any Creative/Performing Arts	1-3

Choose additional courses from areas including art history, foreign language and culture, history, music appreciation, and philosophy.

Social and Behavioral Sciences 6 credits

ANTH-220	Cultural Anthropology.....	3
PSYC-110	General Psychology	3

Contemporary Issues 3 credits

BIO-111	Science, the Environment and Sustainability.....	4
---------	--	---

Social Responsibility and Ethical Reasoning 3 credits

EDUC-330	Multiculturalism: Dialogue and Field Experience.....	3
----------	--	---

Selective 3 credits

BIO-111 provides 1 credit; choose 2 additional credits from any general education area.

Major Studies

80 credits required

Professional Education 24 Credits

EDUC-303	Educational Psychology *	3
EDUC-326	Foundations of Education *	2
RDGED-382	Content Area Reading *	2
SPED-430	Inclusion of Students with Exceptional Needs *	3
STMED-101	Introduction to Math and Science Education *	2
STMED-185	Pre-Student Teaching	1
STMED-260	Curriculum, Methods, and Assessment for Science and Technology *	3
STMED-360	Pre-Student Teaching in Science, Technology and Mathematics Education	1
STMED-390	Laboratory and Classroom Management in Science and Technology *	3
STMED-401	Capstone: Math and Science Education	1
STMED-460	Teaching Methods *	3

Student Teaching/Internship 16 credits

Select 16 credits of student teaching or teaching internship from approved list.

SCIED-XXX	Student Teaching.....	16
-----------	-----------------------	----

Science Courses 40 Credits

Students must complete a least one major certification and one different **major** or **minor** certification.

Broadfield Science: Major Certification (28 credits)

BIO-135	Organismal Biology *	4
CHEM-135	College Chemistry I *	5
CHEM-136	College Chemistry II	5
PHYS-241	College Physics I *	5
PHYS-242	College Physics II	5
PHYS-255	Meteorology *	2
PHYS-258	Introduction to Geology *	2

Biology: Major Certification (28 credits)

BIO-135	Organismal Biology *	4
BIO-136	College Molecular Cell Biology I	5
BIO-332	Genetics.....	3
BIO-350	Ecology.....	3

Additional 13 credits of biology above the introductory level.

Chemistry: Major Certification (28 credits)

CHEM-135	College Chemistry I *	5
CHEM-136	College Chemistry II	5
CHEM-201	Organic Chemistry	4
CHEM-331	Quantitative Analysis	3

Additional 11 credits of chemistry above the introductory level.

Physics: Major Certification (28 credits)

ELEC-260	Electrical Circuits	3
PHYS-151	Astronomy	3
PHYS-241	College Physics I *	5
PHYS-242	College Physics II	5

Additional 12 credits of physics above the introductory level.

Biology: Minor Certification (18 credits)

BIO-135	Organismal Biology *	4
BIO-136	College Molecular Cell Biology I	5

Additional 9 credits of biology above the introductory level.

Chemistry: Minor Certification (18 credits)

CHEM-135	College Chemistry I *	5
CHEM-136	College Chemistry II	5

Additional 8 credits of chemistry above the introductory level.

Earth and Space Science: Minor Certification (18 credits)

PHYS-151	Astronomy	3
PHYS-255	Meteorology	2
PHYS-258	Introduction to Geology	2
PHYS-358	Soil Conservation	4
GEOG-251	Introduction to Geology and Geographic Information Systems	4

Additional 3 credits of approved earth and space science electives.

Environmental Science: Minor Certification (18 credits)

BIO-242	Botany	4
BIO-350	Ecology	3
BIO-351	Ecology Lab	2
PHYS-258	Introduction to Geology	2
PHYS-358	Soil Conservation	4

Additional 3 credits of approved environmental science electives.

Physics: Minor Certification (18 credits)

PHYS-241	College Physics I *	5
PHYS-242	College Physics II	5

Additional 8 credits of physics above the introductory level.

* Student must earn a "C" or better in all professional education and introductory science courses.

Special Education

Introduction

The B.S. in Special Education prepares teachers to be reflective practitioners who demonstrate knowledge, skills and dispositions relative to planning and preparation, the classroom environment, instruction, and professional responsibilities. The UW-Stout framework is compatible with the national Council for Exceptional Children (CEC) knowledge and skill base for all beginning special education teachers. Special education is founded on the philosophy of advocacy for persons with exceptionalities and their families, and of embracing and teaching to individual differences and needs. Special educators must know the characteristics of the learners they serve, possess the skills to design effective interventions and the dispositions to practice within the standards established by CEC.

Curriculum of the program prepares teachers of students with cognitive, emotional/behavioral, and learning disabilities. Graduates of the program will be prepared to work with students with CD, E/BD, and LD, with an emphasis on Cognitive Disabilities. Graduates of the program will be prepared to work at the early childhood through middle childhood level and the early adolescence through adolescence level.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	44 credits
Major Studies	76 credits

Students must demonstrate proficiency in American Red Cross First Aid procedures, either by verifying current certification with their adviser, or by satisfactory completion of HLTH-340 ARC Standard First Aid and Personal Safety (*adding 1 credit to the program credit total*).

Program Requirements

General Education

44 credits required

Communication Skills*	9 credits
ENGL-101 Composition I or	
ENGL-111 Freshman English – Honors I	3
ENGL-102 Composition II or	
ENGL-112 Freshman English – Honors II or	
ENGL-113 Honors Seminar I	3
SPCOM-100 Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences 10 credits

MATH-118 Concepts of Mathematics (<i>or more advanced</i>)*	4
STAT-130 Elementary Statistics*	2
BIO-XXX Any approved biology w/lab	4

Arts and Humanities 6 credits

LIT-XXX Any Literature	3
------------------------------	---

Remaining courses must be from areas including art history, music appreciation, creative arts or performing arts. (No more than one class at the 100 level.)

Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: www.uwstout.edu/soe/current/ugbmi.cfm.

- Pass one of the following skills tests: PPST, CORE, ACT, SAT or GRE. Test scores and test completion dates must meet required specifications as detailed on the SOE web page listed above
- Pass the required teacher background check
- Earn a grade of at least 2.00 (C) in ENGL-101 or ENGL-102 or ENGL-111 and ENGL-112
- Earn a grade of at least 2.00 (C) in SPCOM-100
- Earn a minimum grade of 2.00 (C) in SPED-100 Introduction to Special Education course
- Complete EDUC-326 Foundations of Education.
- Satisfactorily complete Benchmark I Review

Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: www.uwstout.edu/soe/current/ugbmii.cfm.

- Complete electronic portfolio
- Receive satisfactory portfolio assessment by faculty
- Pass Content Knowledge Exam
- Receive clearance through an updated background check
- Attain a 2.75
- Complete a satisfactory tuberculosis test
- Submit copies of resume to the School of Education prior to student teaching
- Complete Application for Student Teaching form

Benchmark III: Program completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: www.uwstout.edu/soe/current/ugbmiii.cfm.

- Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- Complete all program coursework
- Meet all program-specific requirements
- Student teach at three levels: infant/toddler/preschool, kindergarten and primary.
- Receive a satisfactory student teaching assessment

Social and Behavioral Sciences **6 credits**

POLS-210	American Government*	3
PSYC-110	General Psychology	3

Contemporary Issues **3 credits**

Courses must be from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning **3 credits**

PHIL-235	General Ethics	3
----------	----------------	---

Selectives **7 credits**

HIST-210	Modern World History or	
ANTH-220	Cultural Anthropology	3
CHEM-XXX	Chemistry or	
PHYS-XXX	Physics	4

Major Studies

76 credits required

Professional Education Core * **17 credits**

EDUC-303	Educational Psychology*	3
EDUC-326	Foundations of Education*	2
EDUC-330	Multiculturalism: Dialogue and Field Experience	3
EDUC-415	Classroom Management**	2
RDGED-382	Content Area Reading**	2
RDGED-414	Literacy Instruction and Assessment in the Primary Grades**	5

Major Studies * **59 credits**

SPED-100	Introduction to Special Education	1
SPED-300	Introduction to Individuals with Cognitive Disabilities	3
SPED-301	Learning Disabilities	3
SPED-322	Curriculum and Instruction: Severe Disabilities**	2
SPED-323	Mild Disabilities: Social Studies and Science**	3
SPED-324	Curriculum and Instruction: Career and Transition Education**	3
SPED-326	Pre-Student Teaching: Cognitive Disabilities**	2
SPED-328	Assessment for Individual Education/Transition Plans**	3
SPED-330	Communication Disorders	3
SPED-338	Pre-Student Teaching Children/Youth with Disabilities**	2
SPED-420	Schools, Families, and Community Collaboration**	3
SPED-440	Diagnosis and Remediation of Literacy and Math Disabilities**	4
SPED-447	Emotional and Behavioral Problems of Children and Adolescents	3
SPED-481	Student Teaching: Special Education** or	
SPED-488	Intern Teaching: Special Education**	16
SPED-490	Behavioral Intervention in the Schools**	2
PSYC-251	Child Psychology and	
PSYC-352	Adolescent Psychology or	
HDFS-255	Lifespan Human Development and any major studies elective	6

* Required courses with a grade point of 2.0 (C) or better. Courses in which a student earns less than the required 2.0 must be retaken and at least a 2.0 earned prior to student teaching.

** Benchmark I completed and Admission to the School of Education required prior to enrollment

Studio Art

Introduction

The Bachelor of Fine Arts in Studio Art will prepare students to apply knowledge, techniques and methods necessary to become a successful studio artist. Students can pursue a concentration in one of six studio art disciplines: art metals, ceramics, contemporary sculptural practices, drawing, painting and printmaking. The curriculum provides students with experiences in studio work, art history, professional studies and general education. An understanding of liberal studies, art history, the present status of art and design, and an inquisitive attitude toward experimentation in problem-solving will elevate students to a professional level in studio art or in their selected concentration.

Experienced art and design faculty ensure current course content and serve as advisers to the students in respective areas. A required mid-program portfolio review offers students an overview of their progress in the major. Extensive library resources and the art and design department visual resource center are significant assets. A variety of international study abroad opportunities allow students experience with other cultures. Internship and cooperative education opportunities supplement educational theory and practice in a setting with working professionals. A 2.5 grade point average and a 2.0 or better in art and design department courses is required to complete this Bachelor of Fine Arts degree. Students must present an exhibition of their work during their senior year.

General Requirements

Bachelor of Fine Arts Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	65 credits
Concentration Studio Requirements	15 credits

Program Requirements

General Education

40 credits required

Communication Skills **9 credits**

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition 2 or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences **10 credits**

Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

BIO-XXX	Human Biology (for Drawing concentration)	4
---------	---	---

Arts and Humanities **6 credits**

ARTH-223	Survey of Art: Ancient – Medieval	3
ENGL-245	Creative Writing *	3
PHOTO-130	Introduction to Still and Moving Photography **	3

* for Painting concentration

** for Contemporary Sculptural Practices, Art Metals, and Drawing concentrations.

Social and Behavioral Sciences **6 credits**

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues **3 credits**

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning **3 credits**

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives **3 credits**

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

65 credits required

Studio and Related Requirements		41 credits
ART-100	Drawing I	3
ART-101	Two-Dimensional Design Foundations	3
ART-103	Three-Dimensional Design Foundations	3
ART-145	The Practice of Art	3
ART-200	Drawing II	3
ART-209	Painting I	3
ART-211	Contemporary Sculptural Practices I	3
ART-213	Ceramics I	3
ART-215	Art Metals I	3
ART-217	Printmaking I	3
ART-301	Life Drawing I	3
ART-307	Aesthetics and Contemporary Art Theory	3
ART-4XX	Senior Capstone Exhibition	1
ART-445	Senior Seminar	1
DES-220	Introduction to Two-Dimensional Digital Imaging	3

Art Studio Selectives

9-12 credits

Select additional studio experience from ART or DES courses. Six credits must be from outside the studio emphasis.

Art History Requirements

12-15 credits

ARTH-224	Survey of Art: Renaissance — 20th Century	3
----------	---	---

Select remaining Art History courses with at least 3 credits from Modern Art History.

Concentration Studio Requirements

15 credits required

Art Metals Concentration

15 credits

ART-315	Metals II	3
ART-415	Metals III (<i>repeatable</i>)	3
MFGT-110	Materials and Manufacturing Processes	3

Art Studio Selectives: Take one color-based course and one drawing-based course.

Ceramics Concentration

15 credits

ART-313	Ceramics II	3
ART-413	Ceramics III (<i>repeatable</i>)	3

Contemporary Sculptural Practices Concentration

15 credits

ART-311	Contemporary Sculptural Practices II	3
ART-411	Contemporary Sculptural Practices III (<i>repeatable</i>)	3
PHOTO-330	Video Production Fundamentals	3

Drawing Concentration

15 credits

ART-300	Drawing III (<i>repeatable</i>)	3
ART-401	Life Drawing II (<i>repeatable</i>)	3
DES-205	Design Drawing and Concept Visualization	3

Painting Emphasis

15 credits

ART-409	Painting II	3
ART-410	Painting III (<i>repeatable</i>)	3

Printmaking Concentration

15 credits

ART-417	Printmaking II (<i>repeatable</i>)	1-3
---------	--	-----

Students take ART-417 five times (topics may rotate) and one course in each of the following printmaking techniques, plus two additional courses, for a total of 15 credits.

XXX-XXX	Lithography	3
XXX-XXX	Serigraphy	3
XXX-XXX	Relief Printmaking	3

Supply Chain Management

Introduction

The Bachelor of Science Degree in Supply Chain Management will prepare students for a career in the supply chain profession by providing specialized training in an increasingly complex and highly technical field. The program integrates selected areas of engineering, business, management, operations, and processes.

The supply chain encompasses the flow of products and information across all companies from the lowest level supplier through the end customer. Supply Chain Managers focus on designing, managing, integrating and optimizing financial and operational performance of the supply chain. Key activities include: launching products, forecasting demand, managing inventory, sourcing suppliers, processing customer orders, planning and ordering materials, scheduling labor, materials and equipment, lean manufacturing, managing quality, managing logistics and transportation, warehousing, spare parts, and returns.

The program addresses knowledge, skills, and applied research essential to supply chain management, including instruction to improve customer service, minimize costs, improve quality as well as the application of best practices and the effective use of technology. Students participate in hands-on, capstone courses and internships to provide experiential learning. Efficient management of the supply chain is critical to the success of a company. Graduates find their skills to be in high demand.

Admission to the Program

Students may be admitted directly to the program, or if they do not meet at least one of the requirements below, may be accepted as Pre-Supply Chain Management. Students admitted in Pre-Supply Chain Management will remain until they meet the admission requirements.

- **Program Director Approval**
- **Supply Chain Management**
Students must have a composite ACT score of 22 or higher and ACT Math sub score of 22 or higher,
or
Students must have a cumulative GPA of 3.0 or higher, including transfer credits, and completion of a minimum of 54 credits in the B.S. Supply Chain Management Program Plan Sheet.
- **Pre-Supply Chain Management**
Students will be admitted into the Pre-Supply Chain Management program until the above requirements are met. At that time, the student may apply for admission into the B.S. Supply Chain Management degree program.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Core Requirements	80 credits

Program Requirements

General Education

40 credits required

Communication Skills 9 credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences 11 credits

MATH-121	Introduction to College Mathematics or	
MATH-123	Finite Math	4
STAT-130	Elementary Statistics	2
CHEM-135	College Chemistry	5

Arts and Humanities 6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences 7 credits

ECON-210	Principles of Economics	3
GEOG-251	Introduction to Geography and GIS	4

Contemporary Issues 3 credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning 3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selective 1 credits

Course/credit may be selected from any category to meet the 40-credit requirement.

Major Studies

80 credits required

Business and Management Core **28 credits**

BUSCM-100	Introduction to Supply Chain Management or	
BUMGT-100	Introduction to Business Administration	1
BUACT-206	Introduction to Financial Accounting.....	3
BUACT-207	Intro to Corporate/Managerial Accounting	3
BULGL-318	Business Law I	3
BUMKG-330	Principles of Marketing	3
BUMIS-333	MIS Decision Support Systems	3
BUACT-340	Business Finance	3
BUMGT-304	Principles of Management.....	3
INMGT-400	Organizational Leadership.....	3
ENGL-320	Introduction to Business Writing or	
ENGL-415	Technical Writing	3

Supply Chain Management Core **52 credits**

Engineering, Operations and Processes (39 credits)

ENGGR-112	Engineering Graphics Fundamentals	3
MFGT-150	Introduction to Engineering Materials	3
INMGT-200	Production/Operations Management	3
INMGT-305	Resource Planning and Materials Management	3
INMGT-320	Quality Tools	3
INMGT-325	Quality Management	3
INMGT-365	Project Management.....	3
INMGT-440	Lean Enterprise.....	3
BUSCM-338	Principles of Logistics	3
BUINB-338	International Logistics	3
BUSCM-437	Procurement, Sourcing and Supply Chain Management	3
BUMKG-458	Negotiation and Supply Chain Contracts	3
<i>Select one of the following:</i>		
MFGT-251	Fundamentals of Plastic Materials and Processing	3
MFGT-252	Material Removal and Forming Processes	3
MFGT-253	Joining and Casting Processes	3
POWER-260	Introduction to Fluid Power	3
ELEC-204	Electricity/Electronics Fundamentals	3

Capstone Core (7 credits)

INMGT-405	Resource Planning and Materials Management Practicum ...	3
BUSCM-439	Seminar: Supply Chain Systems Design	3
BUSCM-XXX	Co-op or Internship	1

Supply Chain Selectives

Take 6 credits from the following:

BUACT-335	Accounting for Management Decisions	3
BUACT-312	Cost Accounting.....	3
RC-381	Principles of Occupational Risk Control/Safety	2-3
TRHRD-360	Training Systems in Business and Industry	3
INMGT-410	Six Sigma Quality Improvement Methods	3
INMGT-350	Facility Planning	3
INMGT-475	Advanced Program Management	3
XXX-XXX	Other Approved Course	3

Sustainable Management

Introduction

The Bachelor of Science degree in Sustainable Management is a multidisciplinary program designed to help students gain a comprehensive understanding of the ways in which business structures, environmental processes and societal needs intersect. Corporations from across the country helped to develop the curriculum, believing in the value it will bring to their employees and their companies. The Sustainable Management program is a collaborative effort of UW-Extension and four University of Wisconsin campuses: UW-Stout, UW-River Falls, UW-Superior, and UW-Parkside. It provides students with the knowledge and skills needed to create profitable businesses, vibrant communities, and a healthy environment. The program is a 21 course, 63-credit bachelor's degree completion program designed for working professionals, with all courses delivered online.

Students who have completed the first two years of a bachelor's degree, or have an associate's degree, may apply directly to the program. Students who need to complete general education requirements may do so online through UW-Stout or the UW Colleges.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	80 credits

Program Requirements

General Education

42 credits required

Communication Skills **9 credits**

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences **10 credits**

BIO-101	Introductory Biology	4
MATH-120	College Mathematics I (or above)	4
STAT-130	Elementary Statistics	2

Arts and Humanities **6 credits**

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences **6 credits**

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues **3 credits**

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning **3 credits**

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives **3 credits**

Courses/credits may be selected from any category to meet the 40-credit requirement.

Major Studies

78 credits required

Professional Preparation Electives **17 credits**

Some SMGT courses have prerequisites. If you have not completed the prerequisites necessary as part of an associate's degree or prior coursework, you will need to take courses in consultation with your program director to fulfill this requirement.

Core Requirements **63 credits**

SMGT-115	Environmental Science and Sustainability	3
SMGT-230	Triple Bottom Line Accounting for Managers	3
SMGT-235	Economics in Society and Sustainability	3
SMGT-240	Technical Writing for Sustainable Management	3
SMGT-310	Ecology for Sustainable Management	3
SMGT-315	Global Environmental Chemistry	3
SMGT-320	Energy for Sustainable Management	3
SMGT-325	Natural Resource Management	3
SMGT-330	Marketing for a Sustainable World	3
SMGT-331	Sustainable Organizational Finance	3
SMGT-332	Economics of Environmental Sustainability	3
SMGT-335	Management and Environmental Information Systems	3
SMGT-340	Organizational Behavior and Sustainability	3
SMGT-350	Operations Management and Sustainability	3
SMGT-360	Environmental and Sustainability Policy	3
SMGT-370	Logistics, Supply Chain Management, and Sustainability	3
SMGT-430	International Management for a Sustainable World	3
SMGT-435	International Development and Sustainability	3
SMGT-220	Systems Thinking	3
SMGT-460	Environment and Society	3
SMGT-495	Sustainable Management Capstone	3

Technology Education

Introduction

Technology Education is a Bachelor of Science degree program consisting of general, professional and technical course work that leads to teaching certification in all 50 states. Students who complete the B.S. in Technology Education may be eligible for credits relative to Project Lead the Way, a K-12 pre-engineering teaching initiative. Although the program is designed to lead to an education degree, graduates have also found challenging career opportunities in fields related to communication, construction, manufacturing and transportation. More than 32 credits of technical requirements provide students with hands-on experiences using computers, robots, electronics, and with more conventional equipment used in processing materials, transportation, construction and processing information. Course work is enriched by involvement with professional organizations and professional activities.

General Requirements

Bachelor of Science Degree

Total for graduation	128 credits
General Education	43-44 credits
Major Studies	84 credits

Program Requirements

General Education

43-44 credits required

A. Communication Skills **8 Credits**

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Freshman English – Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	2

B. Analytic Reasoning **6 Credits**

MATH-121	Introductory College Mathematics II (or higher level)	4
STAT-XXX	Any Statistics	2

C. Health and Physical Education **2 Credits**

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts* **9 Credits**

LIT-XXX	Any Literature	3
XXX-XXX	Any Creative/Performing Arts	3

*Remaining course must be from areas including art history, creative arts, history, literature, music appreciation, performing arts or philosophy. * Either HIST-210 Modern World must be taken under this category or ANTH-220 Cultural Anthropology must be taken under Category E.*

E. Social and Behavioral Sciences * **9 Credits**

POLS-210	American Government	3
PSYC-110	General Psychology	3

*Remaining course must be from areas of anthropology, economics, geography, political science, psychology or sociology. * See previous note under Category D.*

Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchl.shtml.

- ▶ Pass the Pre-Professional Skills Test (PPST)
- ▶ Attain a 2.75 cumulative grade point average
- ▶ Pass the required teacher background check
- ▶ Earn a grade of at least 2.00 (C) in ENGL-101 and ENGL-102 or ENGL-111 and ENGL-112.
- ▶ Earn a minimum grade of 2.00 (C) in SPCOM-100 Fundamentals of Speech.
- ▶ Earn a minimum grade of 2.00 (C) in TECED-160 Introduction to Technology Education
- ▶ Complete EDUC-326 Foundations of Education
- ▶ Complete General Education Technology requirement
- ▶ Satisfactory rating on Benchmark I Portfolio Assessment rubric
- ▶ Satisfactory rating on Benchmark I Student Interview

Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchl.shtml.

- ▶ Complete Application for Student Teaching form
- ▶ Maintain a 2.75 grade point average
- ▶ Pass Content Knowledge Exam (*Praxis II*)
- ▶ Receive clearance through an updated background check
- ▶ Complete a satisfactory tuberculosis (*TB*) test
- ▶ Receive satisfactory portfolio assessment by faculty
- ▶ Receive satisfactory rating on Benchmark II Student Interview
- ▶ Submit copies of resume to the School of Education prior to student teaching

Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchl.shtml.

- ▶ Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- ▶ Complete all program coursework
- ▶ Meet all program-specific requirements
- ▶ Student teach at two levels: Middle School and High School.
- ▶ Receive a satisfactory student teaching assessment

F. Natural Sciences (with Lab) 8 Credits

BIO-111 Science, Society and the Environment4

Choose the following PHYS courses or others at a higher level:

PHYS-211 Introduction to Physics3

PHYS-212 Introduction to Physics Lab 1

G. Technology 2 Credits

Major Studies

84 credits required

Professional Education 13 credits

Grade of "C" or better required for all courses.

EDUC-303 Educational Psychology 3

EDUC-326 Foundations of Education 2

EDUC-336 Multiculturalism: Issues and Perspectives 2

EDUC-376 Field Experience – Cross Cultural Experience 1

EDUC-382 Secondary Reading and Language Development 2

SPED-430 Inclusion of Students with Exceptional Needs 3

Technology Teacher Education Courses 33 credits

Grade of "C" or better required for all courses.

STMED-160 Introduction to Technology and Science Education3

STMED-260 Curriculum, Methods and Assessment
for Science and Technology Education 3

STMED-185 Pre-Student Teaching 1

STMED-390 Laboratory and Classroom Management in Science and Technology 3

STMED-460 Teaching Methods for Science and Technology Education 3

TECED-325 Technology for Elementary School Children 2

TECED-340 Middle School Technology Education2

TECED-409 Student Teaching 16

The Designed World 34 credits

AEC-172 Construction Technology 3

ELEC-204 Electricity/Electronics Fundamentals..... 3

GCM-141 Graphic Communications 3

INMG-T-314 Industrial Enterprise Practicum 3

MFGT-110 Materials and Manufacturing Processes3

MFGT-204 Polymer Processes 3

RD-205 Design for Industry 3

TECED-XXX Project Lead the Way Gateway to Technology Seminar1

TECED-XXX Project Lead the Way
Introduction to Engineering Design Seminar1

TRANS-204 Energy Technology..... 3

XXX-XXX Mechatronics..... 2

Take one of the following courses:

MFGT-202 Welding and Casting Processes 3

MFGT-203 Machining Metal Forming Processes 3

Take one of the following courses:

AEC-131 Architectural Graphics 3

ENGGR-112 Principles Engineering Drawing 3

Advanced Technical Selectives 4 credits

All Technology Education students are required to meet with their advisor to plan their Advanced Technical Selectives. The purpose of this requirement is to provide the student with an opportunity to create more depth of understanding and skill within technical areas that are likely to be part of their teaching responsibilities at the secondary level. Some courses or sequences of courses may provide a student the opportunity to seek certifications by outside accrediting bodies such as Project Lead the Way. Technical college transfers need to meet with an advisor to gain approval of technical transfer courses.

Vocational Certification

A student who wishes to become certifiable to teach an advanced level occupational skills course in Wisconsin must complete this degree program, a course in Principles of Career and Technical Education, and a course in Organization and Administration of Cooperative Education Programs. The student must also have a minimum of 2,000 hours of related work experience.

Technology and Science Education

Introduction

UW-Stout is the only university or college in the state of Wisconsin offering a Bachelor of Science degree combining Technology and Science Education, offering students a unique opportunity. Students will participate in a collaborative, interdisciplinary degree program that prepares them as teachers in the overlapping fields of science and technology. Coursework in the program leads to a dual teaching certification in technology education with a major or minor certification in biology, chemistry, or physics. To fulfill the requirements of the program, students will complete general education, technology, science, and education courses. Students will also complete required pedagogical courses specifically in technology and science education. Pre-student teaching experiences in both middle and high school classrooms as well as a semester-long student teaching experience will be required.

General Requirements

Bachelor of Science Degree

Total for graduation.....	137 credits
General Education	41 credits
Major Studies	96 credits

Program Requirements

General Education

41 credits required

A. Communication Skills 8 credits

ENGL-101	Freshman English – Composition or	
ENGL-111	Freshman English – Honors I	3
ENGL-102	Freshman English – Reading and Related Writing or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar I	3
SPCOM-100	Fundamentals of Speech	2

B. Analytic Reasoning 7 credits

MATH-153	Calculus I	4
STAT-320	Statistical Methods	3

C. Health and Physical Education 2 credits

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts* 9 Credits

LIT-XXX	Any Literature	3
XXX-XXX	Any Creative/Performing Arts	3

*Remaining course must be from areas including art history, creative arts, history, literature, music appreciation, performing arts or philosophy. * Either HIST-210 Modern World must be taken under this category or ANTH-220 Cultural Anthropology must be taken under Category E.*

E. Social and Behavioral Sciences * 9 Credits

POLS-210	American Government	3
PSYC-110	General Psychology	3

*Remaining course must be from areas of anthropology, economics, geography, political science, psychology or sociology. * See previous note under Category D.*

Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchI.shtml.

- ▶ Pass the Pre-Professional Skills Test (PPST)
- ▶ Attain a 2.75 cumulative grade point average
- ▶ Pass the required teacher background check
- ▶ Earn a grade of at least 2.00 (C) in ENGL-101 and ENGL-102 or ENGL-111 and ENGL-112.
- ▶ Earn a minimum grade of 2.00 (C) in SPCOM-100 Fundamentals of Speech.
- ▶ Earn a minimum grade of 2.00 (C) in STMED-160 Introduction to Technology and Science Education
- ▶ Complete EDUC-326 Foundations of Education
- ▶ Complete General Education Technology requirement
- ▶ Satisfactory rating on Benchmark I Portfolio Assessment rubric
- ▶ Satisfactory rating on Benchmark I Student Interview

Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchI.shtml.

- ▶ Complete Application for Student Teaching form
- ▶ Maintain a 2.75 grade point average
- ▶ Pass Content Knowledge Exam (*Praxis II*)
- ▶ Receive clearance through an updated background check
- ▶ Complete a satisfactory tuberculosis (*TB*) test
- ▶ Receive satisfactory portfolio assessment by faculty
- ▶ Receive satisfactory rating on Benchmark II Student Interview
- ▶ Submit copies of resume to the School of Education prior to student teaching

Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchI.shtml.

- ▶ Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- ▶ Complete all program coursework
- ▶ Meet all program-specific requirements
- ▶ Student teach at two levels: Middle School and High School.
- ▶ Receive a satisfactory student teaching assessment

F. Natural Sciences (with Lab) 4 credits

BIO-111	Science, Society and Environment	4
---------	--	---

Note: Students must also complete a physical science course.

G. Technology 2 credits

Major Requirements

96 credits required

Education 13 credits

Grade of "C" or better required for all courses.

EDUC-303	Education Psychology	3
EDUC-326	Foundations of Education.....	2
EDUC-336	Multiculturalism: Issues and Perspective.....	2
EDUC-376	Field Experience: Cross-cultural.....	1
EDUC-382	Secondary Reading and Language.....	2
SPED-430	Inclusion of Students with Exceptional Needs.....	3

Technology Teacher Education Courses 33 credits

Grade of "C" or better required for all courses.

STMED-160	Introduction to Technology and Science Education	3
STMED-260	Curriculum, Methods and Assessment for Science and Technology Education	3
STMED-XXX	Pre-Student Teaching	1
STMED-390	Laboratory and Classroom Management in Science and Technology	3
STMED-409	Student Teaching	16
STMED-XXX	Advanced Curriculum Methods and Assessment for Technology Education.....	3
TECED-325	Technology for Elementary School Children	2
STMED-340	Middle School Technology Education	2

The Designed World 32 credits

AEC-172	Construction Technology	3
ELEC-204	Electricity/Electronics Fundamentals.....	3
GCM-141	Graphic Communications.....	3
INMGT-314	Industrial Enterprise Practicum	3
MFGT-110	Materials and Manufacturing Processes	3
MFGT-204	Polymer Processes	3
RD-205	Design for Industry	3
TRANS-XXX	Trans and Energy.....	3
XXX-XXX	Mechatronics.....	2

Take one of the following courses:

MFGT-202	Welding and Casting Processes	3
MFGT-203	Machining Metal Forming Processes	3

Take one of the following courses:

AEC-131	Architectural Graphics	3
CADD-112	Principles Engineering Drawing	3

Science Courses 18 credit minimum

*Choose at least one **major** or one **minor** science certification from the list below:*

Biology Major Certification (28 credits)

BIO-135	Organismal Biology	4
BIO-136	College Molecular Cell Biology I	5
BIO-332	Genetics.....	3
BIO-350	Ecology.....	3

Choose 13 additional credits of approved biology selectives above the introductory level.

Chemistry Major Certification (28 credits)

CHEM-135	College Chemistry I.....	5
CHEM-136	College Chemistry II	5
CHEM-201	Organic Chemistry.....	4
CHEM-331	Quantitative Analysis	3

Choose 11 additional credits of approved chemistry selectives above the introductory level.

Physics Major Certification (28 credits)

PHYS-241	College Physics I.....	5
PHYS-242	College Physics II.....	5
PHYS-250	The Physics of Light and Color	3
ELEC-260	Electrical Circuits.....	3

Choose 12 additional credits of approved physics selectives above the introductory level.

Biology Minor Certification (18 credits)

BIO-135	Organismal Biology	4
BIO-136	College Molecular Cell Biology I	5

Choose 9 additional credits of approved biology selectives above the introductory level.

Chemistry Minor Certification (18 credits)

CHEM-135	College Chemistry I	5
CHEM-136	College Chemistry II	5

Choose 8 additional credits of approved chemistry selectives above the introductory level.

Physics Minor Certification (18 credits)

PHYS-241	College Physics I	5
PHYS-242	College Physics II	5

Choose 8 additional credits of approved physics selectives above the introductory level.

Vocational Rehabilitation

Introduction

The main objective of this program is to provide the field of rehabilitation with baccalaureate level personnel who have the competencies necessary to help persons with disabilities optimize their vocational potential. A general listing of these competencies includes:

1. Knowledge of the history, philosophy and development of the rehabilitation movement; knowledge of the rehabilitation process as it exists in various settings, including supported environments, rehabilitation organizations, private rehabilitation, vocational rehabilitation agencies; knowledge of mental, physical and social disabilities plus the vocational limitations of these disabilities; knowledge of, and ability to utilize community resources to assist persons with disabilities; knowledge of, and ability to relate to allied professions: medicine, psychology, social work, physical therapy; and knowledge of, and ability to utilize occupational information and career planning methods.
2. Elementary skill in the use of vocational evaluation techniques, elementary skill in work adjustment and counseling techniques, and elementary skill in utilizing job placement and follow-up procedures for persons with disabilities.
3. Ability to interact effectively with persons with disabilities. This could include persons with physical, emotional and social disabilities such as mental illness, mental retardation, blindness, deafness, alcoholism, epilepsy, and those who have committed criminal offenses.

The graduates of this program are employed in community-based rehabilitation programs, rehabilitation organizations, vocational rehabilitation agencies, private rehabilitation, correctional centers, business and industry, adult day centers, adolescent treatment programs and services, mental health clinics, halfway houses, and a variety of other settings serving persons with disabilities. Students who complete Special Education Certification are endorsed for Wisconsin licensure to teach students with cognitive disabilities, grades 6-12. Opportunities for advancement to supervisory and administrative positions are excellent. Graduate study in rehabilitation is available in more than 80 colleges and universities.

Students must select their concentration option by the end of the first semester of their junior year. Students who do not complete a concentration must submit a written plan showing development of a coherent selection of coursework consistent with the objectives of the degree. The plan must be submitted and approved by the program director by the end of the first semester of the junior year.

General Requirements

Bachelor of Science Degree

Total for graduation	120 credits
General Education	40 credits
Major Studies	55 credits
Concentration	22 credits
Electives	3 credits

Students who are taking the Special Education Certification concentration should turn to that section for program requirements. Students taking any of the other concentrations should refer to the program requirements that follow here.

Program Requirements for Vocational Rehabilitation

General Education

40 credits required

Communication Skills

9 Credits

ENGL-101	Composition I or	
ENGL-111	Freshman English – Honors I	3*
ENGL-102	Composition II or	
ENGL-112	Freshman English – Honors II or	
ENGL-113	Honors Seminar	3*
SPCOM-100	Fundamentals of Speech	3*

Analytic Reasoning and Natural Sciences

10 Credits

BIO-132	Human Biology	4
---------	---------------------	---

Remaining courses must include at least one mathematics course or statistics course.

Arts and Humanities

6 Credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, philosophy and performing arts.

Social and Behavioral Sciences

6 Credits

PSYC-110	General Psychology	3
----------	--------------------------	---

Remaining courses must be from one or more areas including anthropology, economics, geography, political science and sociology.

Contemporary Issues

3 Credits

Courses must be selected from the list of approved contemporary issues courses.

Social Responsibility and Ethical Reasoning

3 Credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives

3 Credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

**Minimum grade of 2.0 is required; course must be repeated if minimum grade is not earned.*

Major Studies

55 credits required

A minimum grade of 2.0 is required in all rehabilitation studies. After earning 90 credits, students must maintain a 2.5 grade point average in rehabilitation studies to continue in the degree program.

Required Courses (3 credits)

BIO-220	Physiology of Disabilities.....	3
COUN-405	Introduction to Counseling Skills	3
REHAB-101	Introduction to Rehabilitation	3
REHAB-102	Community Resources	3
REHAB-205	Rehabilitation Practicum	3
REHAB-230	Psycho-Social Aspects of Disabilities	3
REHAB-310	Vocational Evaluation.....	3
REHAB-401	Principles and Techniques of Caseload Management	2
REHAB-410	Job Placement Processes	3
REHAB-420	Psychological Testing – Individuals With Disabilities	3
REHAB-470	Work Adjustment Services	3
REHAB-X98	Field Experience in Rehabilitation	3

Rehabilitation Studies

Select 21 credits, including a minimum of two courses from Disability Selectives and two from Service Delivery Selectives.

Disability Selectives

Select at least two courses from the following:

COUN-494	Counseling Older Persons or	
REHAB-355	Rehabilitation of the Older Disabled Worker.....	2-3
PSYC-361	Abnormal Psychology	3
REHAB-305	Sign Language I	3
REHAB-306	Sign Language II	3
REHAB-325	Rehabilitation and Sensory Disability	3
REHAB-320	Rehabilitation and Chemical Dependency	3
REHAB-321	Rehabilitation of Public Offenders.....	3
REHAB-482	Sexuality and Disability.....	2
REHAB-327	Psychiatric Rehabilitation	2
REHAB-XXX	Cognitive and Complex Disabilities	3
SCOUN-447	Behavior Problems of Children.....	2
SOC-360	Sociology of Juvenile Delinquency.....	3
SPED-300	Introduction to Individuals With Cognitive Disabilities	3
SPED-301	Learning Disabilities	3
SPED-330	Introduction to Communication Disorders.....	2
SPED-430	Inclusion of Students with Exceptional Needs.....	3

Service Delivery Selectives

Select at least two courses from the following:

HDFS-225	Skill Training for Individual/Family Interventions	3
PSYC-370	Interpersonal Effectiveness Training	3
REHAB-300	Special Topics in Rehabilitation	1-2
REHAB-350	Independent Living	2
REHAB-351	Benefits Coordination	3
REHAB-360	Assistive Technology.....	2
REHAB-402	Management of Non-Profit Organizations	3
REHAB-452	Group Processes in Rehabilitation Settings	2
REHAB-460	Rehabilitation in the Private Sector	3
REHAB-461	Forensics for the Human Service Professional	2
REHAB-462	Absence Management	3
REHAB-480	Advanced Rehabilitation Practicum	2-3
REHAB-483	Vocational Counseling Issues	1-3
REHAB-488	Developing Collaborative Partnerships	3
REHAB-X49	Rehabilitation Cooperative Education Experience	2-6
REHAB-X99	Independent Study	1-3
REHAB-XXX	Benefit Specialist Practice and Application	3

SOCWK-205	Introduction to Social Work	3
SOCWK-420	Human Behavior and Social Environment	3
SOCWK-430	Social Casework Methods.....	3
SOCWK-440	Social Work With Groups and Families	3
SPED-324	Curriculum and Instruction: Career and Transition Education	3

Concentrations

22–25 credits required

A minimum grade of 2.5 is required in all concentration courses.

Community-Based Rehabilitation

22 credits

Required Courses (15 credits)

BUMKG-330	Principles of Marketing	3
CTE-334	Performance Analysis	2
REHAB-350	Independent Living	2
REHAB-360	Assistive Technology.....	2
REHAB-402	Management of Non-Profit Organizations	3
REHAB-480	Advanced Rehabilitation Practicum	3

Selectives (7 credits)

BULGL-318	Business Law I.....	3
ECON-420	Labor Economics.....	3
ECON-421	Collective Bargaining and Labor Relations	2
INMG-400	Organizational Leadership.....	3
PSYC-370	Interpersonal Effectiveness Training	2
PSYC-379	Public Relations	2
REHAB-462	Absence Management	3
REHAB-460	Rehabilitation in the Private Sector	3
REHAB-X99	Independent Study	1-3
REHAB-488	Developing Collaborative Partnerships	3
SOC-340	Sociology of Work.....	3
SPCOM-200	Persuasive Speaking	2
TECH-340	Future of Work	1-2

Independent Living Rehabilitation

22 credits

Required Courses (15 credits)

COUN-406	Peer Supervisory Experience	1
PSYC-370	Interpersonal Effectiveness Training.....	2
REHAB-350	Independent Living	2
REHAB-360	Assistive Technology.....	2
REHAB-480	Advanced Rehabilitation Practicum	3
REHAB-482	Sexuality and Disability	2
REHAB-488	Developing Collaborative Partnerships	3

Selectives (7 credits)

FCSE-385	Family Housing.....	3
FN-102	Nutrition For Healthy Living.....	2
HDFS-115	Healthy Couple Relationships.....	3
HDFS-255	Lifespan Human Development.....	3
HDFS-340	Human Development: Late Adulthood	2
PSYC-371	Introduction to Health Psychology	3
REHAB-452	Group Processes in Rehabilitation Settings	2
REHAB-X99	Independent Study	1-3
SOCWK-205	Introduction to Social Work	3
SOCWK-420	Human Behavior and Social Environment	3

Recreational Rehabilitation 22 credits*Required Courses (14 credits)*

HLTH-340	Community CPR, Automatic External Defibrillation and First Aid.....	2
HLTH-355	Kinesiology	3
REHAB-480	Advanced Rehabilitation Practicum	3
PSYC-371	Introduction to Health Psychology	3
SOC-325	Sociology of Leisure	3

Selectives (8 credits)

HLTH-101	Discovering Wellness	1
HLTH-365	Physiology of Exercise.....	3
PE-265	Physical Activities for Young Children	2
PE-352	Theory and Management of Coaching	2
PE-362	Psycho-Social Aspects of Athletics	2
PE-480	Coaching Youth Athletes	2
PE-XXX	Any Physical Education (activity).....	1
REHAB-X99	Independent Study	1-3

Note: No PE activity course may be counted to fill both GE health/physical education requirements and restricted concentration selectives.

Rehabilitation Counseling 22 credits*Required Courses (15 credits)*

COUN-406	Peer Supervisory Experience	1
HDFS-225	Skill Training for Individual/Family Interventions.....	3
PSYC-120	Psychology of Adjustment	3
REHAB-480	Advanced Rehabilitation Practicum	3
REHAB-320	Rehabilitation and Chemical Dependency	3
REHAB-452	Group Processes in Rehabilitation Settings	2

Selectives (7 credits)

COUN-494	Counseling Older Persons	2-3
HDFS-310	Family Stress, Coping and Adaptation	1
HDFS-332	Death and Bereavement	1
PSYC-370	Interpersonal Effectiveness Training	2
REHAB-321	Rehabilitation of Public Offenders.....	3
REHAB-482	Sexuality and Disability.....	2
REHAB-483	Vocational Counseling Issues	2
REHAB-488	Developing Collaborative Partnerships	3
REHAB-X99	Independent Study	1-3
SOC-340	Sociology of Work.....	3
SOCWK-420	Human Behavior and Social Environment	3

Criminal Justice 25 credits*Required Courses (15 credits)*

REHAB-315	Rehabilitation and Criminal Justice	3
REHAB-321	Rehabilitation of Public Offenders.....	3
REHAB-488	Developing Collaborative Partnerships	3
REHAB-480	Advanced Rehabilitation Practicum	3
SOC-315	Criminology.....	3

Choose one Disability Selective (3 credits)

PSYC-361	Abnormal Psychology	3
SOC-360	Sociology of Juvenile Delinquency.....	3
SPED-301	Learning Disabilities	3
SPED-300	Introduction to Individuals with Cognitive Disabilities.....	3

Choose one AODA Selective (2-3 credits)

REHAB-333	Adolescent Substance Use/Abuse	2
REHAB-320	Rehabilitation and Chemical Dependency	3

Choose one Prevention/Intervention Selective (2-3 credits)

CTE-474	Adult Education	2
HDFS-225	Skill Training for Individual/Family Interventions	3
REHAB-452	Group Processes in Rehabilitation Settings	2
SOCWK-430	Social Casework Methods.....	3

Choose one Diversity Selective (2-3 credits)

SOC-375	Sociology of Minority Groups	3
HDFS-335	Critical Cultural Competence	2
EDUC-307	Racial and Cultural Perspectives on Applied Human Relations	2
EDUC-336	Multiculturalism Issues and Perspectives.....	2

Psychiatric Rehabilitation 22 credits

PSYC-120	Psychology of Adjustment	3
PSYC-361	Abnormal Psychology or	
PSYC-466	Alcohol and Family Systems or	
REHAB-327	Psychiatric Rehabilitation	3
REHAB-333	Adolescent Substance Use and Abuse	2
REHAB-480	Advanced Psychiatric Rehabilitation Practicum.....	3
REHAB-462	Absence Management	3
REHAB-452	Group Processes in Rehabilitation Settings	2
REHAB-488	Developing Collaborative Partnerships	3
SCOUN-447	Behavior Problems of Children	3

Social Work 22 credits

HDFS-255	Lifespan Human Development.....	3
HDFS-335	Critical Cultural Competence	2
REHAB-480	Advanced Rehabilitation Practicum	2
SOCWK-205	Introduction to Social Work	3
SOCWK-420	Human Behavior and Social Environment	3
SOCWK-430	Social Casework Methods.....	3
SOCWK-440	Social Work with Groups and Families.....	3
SOCWK-450	Macro Social Work Practice.....	3

Substance Abuse Counseling **22 credits***Required Courses (18 credits)*

REHAB-333	Adolescent Substance Use and Abuse	2
REHAB-320	Rehabilitation and Chemical Dependency	3
REHAB-327	Psychiatric Rehabilitation	3
REHAB-452	Group Processes in Rehabilitation Settings	2
REHAB-488	Developing Collaborative Partnerships	3
REHAB-482	Sexuality and Disability	2
REHAB-480	Advanced Rehabilitation Practicum	3

Selectives (4 credits)

RC-371	Alcohol, Drugs and Accident Prevention	3
COUN-494	Counseling the Older Person or	
REHAB-355	Rehabilitation of the Older Disabled Worker	2-3
HDFS-420	Family Research and Methodology	3
PSYC-370	Interpersonal Effectiveness Training	2
SPED-300	Introduction to Individuals With Cognitive Disabilities	3
SPED-301	Learning Disabilities	3
REHAB-315	Rehabilitation and Criminal Justice	3
SOC-360	Sociology of Juvenile Delinquency	3
PSYC-333	Drugs and the Brain	3

Individualized **22 credits***Required Concentration Courses – none.*

Selectives – 22 credit block chosen in conjunction with and approved by program director.

Electives

2-5 credits required

Program Requirements for the Special Education Certification Concentration

Leads to Wisconsin #806 Licensure.

General Education

40 credits required

Communication Skills*	9 Credits
ENGL-101 Composition I or	
ENGL-111 Freshman English – Honors I	3
ENGL-102 Composition II or	
ENGL-112 Freshman English – Honors II or	
ENGL-113 Honors Seminar	3
SPCOM-100 Fundamentals of Speech	3

Analytic Reasoning and Natural Sciences 10 Credits

BIO-132 Human Biology	4
-----------------------------	---

Remaining courses must include at least one mathematics course or statistics course.

Arts and Humanities 6 Credits

Courses must be from two or more areas including art history, creative arts, music appreciation, performing arts and philosophy.

Social and Behavioral Sciences 6 Credits

XXX-XXX Contemporary Issues	3
-----------------------------------	---

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Social Responsibility and Ethical Reasoning 3 Credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses.

Selectives 3 Credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Special Education Certification

79 credits required

Professional Education*	13 credits
EDUC-303 Educational Psychology.....	3
EDUC-326 Foundations of Education.....	2
EDUC-336 Multiculturalism: Issues and Perspectives.....	2
EDUC-376 Field Experience – Cross Cultural Experience.....	1
RDGED-382 Content Area Reading	2
SPED-430 Inclusion of Students With Exceptional Needs	3

Major Studies* 66 credits

COUN-405 Introduction to Basic Counseling Skills	3
EDUC-415 Classroom Management	2
HDFS-255 Lifespan Human Development.....	3
PSYC-352 Adolescent Psychology or	
REHAB-101 Introduction to Rehabilitation	3
REHAB-102 Community Resources	3
REHAB-230 Psychosocial Aspects of Disabilities	3
REHAB-310 Vocational Evaluation.....	3
REHAB-401 Principles and Techniques of Caseload Management	2
REHAB-410 Job Placement Processes	3
REHAB-420 Psychological Testing of Individuals With Disabilities	3
SPED-330 Introduction to Communication Disorders.....	3
SPED-100 Introduction to Special Education	1
SPED-481 Student Teaching: Special Education	16
SPED-300 Introduction to Individuals With Cognitive Disabilities	3
SPED-322 Curriculum and Instruction: Severe Disabilities	2
SPED-323 Mild Disabilities: Social Studies and Science	3
SPED-324 Curriculum and Instruction: Career and Transition Education	3
SPED-326 Pre-Student Teaching: Cognitive Disabilities.....	2
SPED-328 Assessment for Individual Educational/Transitional Plans.....	3
SPED-420 Schools, Families, Community Collaboration	3

See program director for grade point average, student teaching, and practicum requirements that lead to certification by UW-Stout. Students must adhere to policies and criteria established for completion of education programs and certification established by the School of Education.

* Courses require a grade of "C" (2.0) or better.

Minors

Introduction

Minors are defined as either “studies in the discipline” or as “teaching.” Teaching minors are those approved by the State Department of Public Instruction for licensure. Requirements for teaching minors include an education major, passing score on the content exam for the minor, portfolio evidence of competence in the Wisconsin Teacher

standards and the minor’s content, and student teaching experience in the minor field. Contact the School of Education for information regarding teaching minors. Approval forms and minor program plans are available from the School of Education office and the department offices offering the minor.

Applied Foreign Language

Department of Speech Communication,
Foreign Language, Theatre and Music

Before declaring the minor, student must have approval of an individual course plan. The applied project requires signatures of both major and minor program advisers.

26 credits are required.

XXX-XXX	Elementary Foreign Language A8
XXX-XXX	Intermediate Foreign Language A8
XXX-XXX	Elementary Foreign Language B8
TRDIS-350	Applied Foreign Language2

Applied Peace Studies

Social Science Department

20 credits are required

Required Courses

PAX-201	Introduction to Applied Peace Studies3
PAX-XXX	Applied Conflict Analysis and Peacebuilding3
PAX-XXX	Seminar in Applied Peace Studies2

Electives

Social, cultural, and Political Components

Select 6 credits:

ECON-350	Environment and Natural Resource Economics3
ECON-480	International Economics3
POLS-260	Problems of U.S. Foreign Policy3
SOC-225	Social Problems3
SOC-375	Sociology of Minority Groups3
LIT-275	Environmental Literature3

Understanding the Nature of Conflict

Select 3 credits:

HIST-311	Women and War3
HIST-330	History of World War II3
HIST-335	World War II: An Ethic and Global History3
HIST-350	History of the Vietnam War3

Movements Toward Peace

Select 3 credits:

PHIL-205	Philosophy of Religion3
PHIL-215	Eastern Philosophy3
PHIL-220	Multicultural Philosophy3

Art

Department of Art and Design

22 credits are required.

Required Courses

ART-100	Drawing I3
ART-101	Fundamentals of Design3
ARTH-222	Introduction to Art3

Selectives

The additional 13 selective credits may be accumulated for a general or a concentrated minor. For a general art minor, students may select 13 credits from ART-XXX, DES-XXX or ARTH-XXX. For a concentrated minor, students select 13 credits in one specific art or design area such as art history, art metals or printmaking. At least seven of the 13 credits must be from ART-XXX, DES-XXX or ARTH-XXX. A minimum of six credits must be completed at UW-Stout to receive an Art minor. A minimum grade of “C” (2.0) is required in all courses.

Art History

Department of Art and Art History

21 credits required

Required Courses (6 credits)

ARTH-223	Survey of Art: Ancient through Medieval3
ARTH-224	Survey of Art: Renaissance through Modern3

Choose 3 credits from each of these categories:

Ancient to Baroque Distribution (3 credits)

ARTH-326	Greek and Roman Art3
ARTH-327	Medieval Art3
ARTH-328	Italian Renaissance Art3
ARTH-329	Northern Renaissance Art3
ARTH-330	Baroque Art3
ARTH-256	Art and the Plague3

Modern Distribution (3 credits)

ARTH-331	Art and Controversy3
ARTH-335	19th Century Art in Europe3
ARTH-336	Modern Art3
ARTH-337	Art Since 19503

Diversity Distribution: Global/Ethnic/Non-Western/Gender Studies (3 credits)

ARTH-225	Introduction to Non-Western Art3
ARTH-332	Gender and Art3
ARTH-339	Japanese Art and Culture3
ARTH-256	Special Topics in Art History: Art in Italy3

Design Distribution (3 credits)

ARTH-319	History of Design3
ARTH-333	History of Interiors and Furnishings3
ARTH-340	History of Interactive Media3

Selectives (3 credits)

Choose three additional credits from the categories listed above.

Biology

Department of Biology

20 credits required

Required Courses

BIO-136	College Molecular Cell Biology I	5
BIO-332	Genetics	3
BIO-350	Ecology	3

Select one of the following:

BIO-101	Introductory Biology	4
BIO-111	Science, the Environment and Sustainability	4
BIO-132	Human Biology	4
BIO-135	Organismal Biology	4
BIO-141	Plants and People	4

Choose remaining credits from biology courses at the 200 level or higher to fulfill the 20 credit minimum. A minimum grade of "C" is required for all courses applied to the biology minor.

Biomedical Instrumentation

Department of Engineering and Technology

22 credits are required

CHEM-125	Principles of Chemistry for Health Sciences or	
CHEM-135	College Chemistry I	5
BIO-234	Physiology and Anatomy.	4
ELEC 204	Electricity Electronics Fundamentals or	
ELEC 260	Electrical Circuits or	
ELEC 290	Circuits and Devices or	
CEE 205	Circuit Analysis and Design.	3-4
ELEC-XXX	Biomedical Instrumentation.....	3
BIO-358	Introductory Pharmacology or	
BIO-360	Introduction to Neuroscience or	
BIO-362	Advanced Physiology	2-3

Selectives

Additional courses to complete 22 credits will be selected from a list provided by the adviser.

Business Administration

Department of Business

22 credits are required.

Required Courses

BUACT-206	Introduction to Financial Accounting	3
BUACT-207	Introduction – Corporate and Managerial Accounting.....	3
BUMGT-304	Principles of Management	3
BUMKG-330	Principles of Marketing.....	3
ECON-210	Principles of Economics I.....	3
ECON-215	Principles of Economics II.....	3

Selectives

Select 4 credits from the list supplied by the department.

Chemistry

Department of Chemistry

22 credits are required.

Required Courses

CHEM-125	Principles of Chemistry for Health Sciences or	
CHEM-135	College Chemistry I	5
CHEM-136	College Chemistry II	5
CHEM-201	Organic Chemistry I.....	4

Select one of the following courses:

CHEM-204	Organic Chemistry II Lecture	3
CHEM-331	Quantitative Analysis	3
CHEM-335	Instrumental Methods of Analysis	3
CHEM-301	Physical Chemistry Lecture and	3
CHEM-303	Physical Chemistry Laboratory.....	1

Selectives

Additional departmental offerings to complete 22 credits will be selected.

A minimum grade of "C" (2.0) is required in all chemistry courses applied toward the chemistry minor.

Coaching

Department of Physical Education

24 credits are required.

Area I: Medical Emergencies (5 credits required)

HLTH-340	ARC Standard First Aid and Personal Safety.....	2
HLTH-350	Prevention and Care of Athletic Injuries.....	3

Area II: Principles and Psycho-Social Foundations of Coaching

(4 credits required)

PE-352	Theory and Management of Coaching	2
PE-362	Psycho-Social Aspects of Athletics	2

Area III: Methods and Strategies of Coaching (2 credits required)

PE-401	Coaching Gymnastics.....	2
PE-460	Coaching Basketball.....	2
PE-461	Coaching Football.....	2
PE-465	Coaching Competitive Swimming.....	2
PE-470	Coaching Baseball	2
PE-471	Coaching Track and Field.....	2
PE-477	Coaching Tennis.....	2
PE-478	Coaching and Officiating Volleyball.....	2
PE-479	Coaching Wrestling.....	2
PE-480	Coaching Young Athletes	2
PE-481	Coaching Ice Hockey	2
PE-483	Coaching Softball.....	2
PE-483	Coaching Soccer	2

Area IV: Kinesiological and Biomechanical Foundations of Coaching

(7 credits required)

BIO-132	Human Biology	4
HLTH-355	Kinesiology	3

Area V: Physiological Foundations of Coaching (3 credits required)

HLTH-365	Physiology of Exercise	3
----------	------------------------------	---

Area VI: Practicum in Coaching (required)

PE-490	Practicum in Coaching.....	1-3
--------	----------------------------	-----

Area VII: Selectives

Select additional courses from the list supplied by the department for the 24-credit minor.

Cognitive Neuroscience

Department of Psychology

20 credits are required.

Required courses

CNS-200	Introduction to Cognitive Neuroscience.....	3
CNS-201	Introduction to Cognitive Neuroscience Laboratory.....	1
BIO-360	Introduction to Neuroscience.....	3
PSYC-391	Applied Psychophysiological Methods.....	3
CNS-XXX	Independent Study.....	1-2
CNS-XXX	Special Topics in Cognitive Neuroscience	1-4

Selectives

PSYC-442	Cognitive Process or	
PSYC-432	Perception	3

Electives

Select additional courses to complete 20 credits from the approved list supplied by the advisor. Psychology Majors: No more than 50 percent of credits in the minor can be in PSYC courses.

Computer Networking Systems and Design

Department of Apparel and Communication Technologies

21 credits required

Required courses (9 credits)

ICT-103	Information and Communication Technologies	3
ITM-133	Networking Fundamentals	3
ITM-134	Networking Fundamentals II	3

Selectives (12 credits)

Choose 12 credits from the following courses:

ITM-330	IP Telephony Design and Implementation.....	3
ITM-361	Workstation and Server.....	3
ITM-362	Server Applications	3
ITM-363	Directory Services.....	3
ITM-382	Network Systems Design	3
ITM-383	Intro to Network Security.....	3
ITM-391	Wireless Systems	3
ITM-441	Scalable Internetworks.....	3
ITM-443	Multi-Layer Switched Networks	3
ITM-444	Internetwork Troubleshooting.....	3
ITM-450	Enterprise Solutions and Unified Communications	3
ITM-484	Advanced Network Security and Auditing	3

Computer Science

Department of Mathematics, Statistics and Computer Sciences

21 credits are required.

Required Courses

CS-144	Computer Science I.....	4
CS-145	Computer Science II.....	4
CS-244	Data Structures	4

Selectives

Select additional courses to complete 21 credits from the approved list supplied by the department. Grades for courses taken for the minor must be 2.0 (C) or better.

Construction Safety/Risk Control

Department of Engineering and Technology

Construction Department

18 credits are required.

Required Courses (11 credits)

RC-388	Construction Safety.....	3
RC-392	Construction Risk Management.....	3
RC-383	Occupational Safety Health and Environmental Standards	3
AEC-449	Cooperative Education Experience.....	2

Selectives

Select 7 credits for selectives from program plan sheet supplied by adviser. The minor is specifically limited to Construction majors or those who have taken the eight construction course sequence containing the integrated Risk Control content.

Disability Services

Department of Rehabilitation and Counseling

22 credits are required.

Required Courses

REHAB-101	Introduction to Rehabilitation.....	3
REHAB-102	Community Resources	3
REHAB-230	Psychosocial Aspects of Disability	3

Selectives

Choose 10 credits of restricted professional selectives. See the adviser for available offerings.

REHAB-205	Rehabilitation Practicum.....	3-4
-----------	-------------------------------	-----

Can be taken **only** after all 19 other rehabilitation credits are complete.

Economics

Department of Social Sciences

20-21 credits are required.

Required Courses

ECON-210	Principles of Economics I.....	3
ECON-215	Principles of Economics II.....	3
ECON-325	Economic and Business Statistics or	
STAT-130	Elementary Statistics or	
STAT-320	Statistical Methods.....	2-3
ECON-410	Microeconomics.....	3
ECON-415	Macroeconomics.....	3

Selectives

Select six additional credits from the approved course list supplied by the department.

Teaching Certification

In addition to the 20-21 credits required for the economics minor, students seeking teaching certification must take:

EDUC-304	Secondary Curriculum Methods and Assessment	2
EDUC-305	Secondary Student Teaching	2

English – Writing

Department of English and Philosophy

15 credits are required.

Writing Requirement (3 credits): take any course with an ENGL prefix except 090, 101, 102, 111, 112 and 113.

Literature Requirement (3 credits): take any course with a LIT prefix.

Electives (9 credits): take any additional course with a LIT or ENGL prefix except 090, 101, 102, 111, 112 and 113.

Minor cannot be elected by students in the Professional Communication and Emerging Media program.

Enterprise Technology

Department of Apparel and Communication Technologies

21 credits required.

A. Core Courses (18 credits)

ICT-103	Information and Communication Technologies	3
ICT-305	Information Systems for Enterprise	3
ICT-309	Collaborative Computing	3
ICT-401	Information Technology Policy and Audit	3
ICT-405	Enterprise Technology Seminar	3
BUACT-206	Introduction to Financial Accounting	3

Selective Courses (3 credits)

INMG-200	Product and Operations Management	3
BUSCM-437	Procurement, Sourcing and Supply Chain Management	3

Food Technology

Department of Food and Nutrition

35 credits are required.

Required Courses

INMG-200	Production and Operations Management	3
PKG-150	Packaging Fundamentals.....	2
FN-124	Foods or	
FN-240	Food Science	4
FN-212	Nutrition	3
FN-342	Advanced Foods.....	3
FN-438	Experimental Foods	3
FN-350	Food Processing.....	3
BIO-306	General Microbiology.....	4
CHEM-311	Biochemistry.....	4
CHEM-315	Food Chemistry.....	3
PHYS-211	Introduction to Physics	3

Geographic Information Systems

Department of Social Sciences

20 credits are required.

Required Courses

GEOG-251	Introduction to Geography and Geographic Information Systems	4
GEOG-351	Intermediate Geographic Information Systems.....	4
GEOG-451	Advanced Geographic Information Systems	4
GEOG-452	Geographic Information Systems Research Applications.....	2-4

Selectives

Additional courses to complete a minimum of 20 credits will be selected in consultation with your adviser. Selectives include at least two courses 200 level or above that enhance the tools of GIS for individual programs. A minimum grade of C is required for all courses applied to the Geographic Information Systems minor.

Health and Fitness

Department of Physical Education and Athletics

18-21 credits are required.

Required Courses

HLTH-375	Organization and Administration of Health Education	3
HDFL-115	Individual and Family Relations	or
HDFL-728	Family Life Issues	2-3
FN-102	Nutrition for Healthy Living.....	2
BIO-132	Human Biology.....	or
BIO-234	Physiology and Anatomy	4
HLTH-360	Personal Health and Wellness	3
HLTH-340	ARC Standard First Aid and Personal Safety.....	2
	(or current certification)	
HT-390	Recreation and Fitness Management.....	2
HT-XXX	Health and Fitness Practicum.....	2

Selectives

1-4 additional credits of selectives from program plan sheet supplied by adviser.

Health and Wellness Education

Department of Physical Education and Athletics

24 credits are required.

Required Courses

BIO-132	Human Biology or	
BIO-234	Physiology and Anatomy	4
HLTH-360	Personal Health and Wellness	3
HLTH-375	Methods in Health Education.....	3
HLTH-376	Organization and Administration of Health Education	3
HLTH-485	Student Teaching in Health Education.....	2
HWF-340	Community CPR, Automatic External Defibrillation and First Aid	3

Selectives

6 additional credits of selectives from program plan sheet supplied by adviser.

History

Department of Social Sciences

22 credits are required.

Required Courses

HIST-120	Early United States History.....	3
HIST-121	Modern United States History.....	3
HIST-140	Western Civilization.....	3
HIST-141	Western Civilization.....	3

Selectives

Additional departmental offerings to complete 22 credits will be selected.

History Teaching

Department of Social Sciences

24 credits are required.

Required Courses

EDUC-305	Secondary Student Teaching	2
HIST-120	Early United States History.....	3
HIST-121	Modern United States History.....	3
HIST-140	Western Civilization.....	3
HIST-141	Western Civilization.....	3
HIST-460	History Methods.....	2

Selectives

Choose two of the following courses:

HIST-322	African-American History	3
HIST-360	Asian History.....	3
HIST-380	Latin American History	3

Additional departmental offerings to complete 24 credits will be selected.

Human Development and Family Studies

Department of Human Development and Family Studies

22 credits are required.

Required Courses

HDFS-115	Individual and Family Relations.....	3
HDFS-255	Lifespan Human Development.....	3
HDFS-215	Dynamics of the Family	3

Additional departmental offerings to complete 22 credits will be selected.

Human Physiology

Biology Department

20 credits required

A. Core Courses (10 credits)

BIO-220	Physiology of Disabilities or	
HLTH-365	Physiology of Exercise	3
BIO-234	Physiology and Anatomy or	
BIO-132	Human Biology	4
BIO-362	Advanced Physiology	3

Selective Courses (10 credits)

BIO-125	Biology of Aging	3
BIO-235	Molecular Cell Biology II*	4
BIO-332	Genetics	3
BIO-336	Infection and Immunity	4
BIO-358	Introductory Pharmacology	2
BIO-360	Introduction to Neuroscience	3
BIO-400	Special Topics	1
BIO-425	Proteomics*	3
BIO-434	Cadaver Dissection	3
CHEM-311	Biochemistry*	4
HLTH-355	Kinesiology	3

* These courses must be approved by the minor adviser.

A minimum grade of "C" (2.0) is required in all courses.

Human Resource Management

Department of Psychology

20-24 credits are required.

A. Core courses (9 credits)

PSYC-382	Human Resource Management	3
PSYC-485	Recruitment and Selection of Human Resources	3
PSYC-403	Management of Employee Reward Systems (Compensation)	3

Take one course from each of the following areas:

B. Diversity (2-3 credits)

PSYC-340	Psychology of Individual and Group Difference	3
INMG-415	Women and Minorities in Management.....	2
PSYC-372	Psychology of Sex and Gender.....	3
REHAB-462	Absence Management.....	3
SOC-275	Sociology of Gender Roles.....	3
SOC-375	Sociology of Minority Groups	3

C. Teamwork (2-3 credits)

INMG-430	Employee Involvement: Work Teams	2
PSYC-270	Social Cognition and Behavior	3
PSYC-370	Interpersonal Effectiveness	3
PSYC-379	Public Relations	2
PSYC-455	Myers-Briggs Type Indicator.....	3

D. Organization Training and Development (3 credits)

TRHR-360	Training Systems in Business and Industry	3
INMG-325	Quality Management	3
RC-381	Occupational Safety/Loss Control	2-3

E. Leadership (3 credits)

INMG-400	Organizational Leadership	3
PSYC-381	Industrial Psychology.....	3

F. Experiential (2 credits, with approval)

PSYC-X98	Psychology Field Experience	2
XXX-X49	Cooperative Education Experience.....	1-8

Journalism

Department of English and Philosophy

22 credits are required.

Required Courses

MEDIA-304	Elementary Photography.....	2-3
GCM-141	Graphic Communications and Electronic Publishing	3
ENGL-207	Writing for the Media	3
ENGL-210	Journalism Practicum	1
ENGL-325	Copy Editing and Preparation	2

Writing Selectives

Select 3 to 10 credits from the following:

ENGL-320	Business Writing	3
ENGL-245	Creative Writing.....	3
ENGL-246	Informational Writing.....	3
ENGL-247	Critical Writing.....	3
ENGL-415	Technical Writing	3

Technical Specialty Selectives

Select up to 7 credits from the following:

Projects Emphasis:

ENGL-210	Journalism Practicum	1
ENGL-437	Technical Writing Practicum	1-3

Public Relations Emphasis:

BUMKG-370	Principles of Advertising	3
PSYC-379	Public Relations	2

Media Emphasis:

ENGL-318	Mass Communication: Effects of Technology on Society	3
----------	--	---

Production Emphasis:

GCM-345	Publications Production	3
---------	-------------------------------	---

Lodging Management

Hospitality and Tourism Department

23 credits are required.

Required Courses

BUACTION-206	Introduction to Financial Accounting	3
BULGL-318	Business Law I	3
HT-100	Introduction to Hospitality	2
HT-135	Lodging Systems	3
HT-335	Lodging Operations Management	3
HT-383	Yield Management	3
HT-374	Principles of Timeshare Management	3
HT-330	Resort Planning and Operation or	
HT-430	Lodging Administration	3

Materials

Chemistry Department

20 credits are required.

Requirements (13-14 credits)

MFGT-150	Introduction to Materials	3
MECH-294	Mechanics of Materials or	
PHYS-321	Statics and Strengths of Materials	3-4
CHEM- 341	Chemistry of Materials	4
PHYS-327	Solid State Physics	3

Selectives (choose courses to complete 20 credits)

NANO-330	Characterization Methods of Nanomaterial	3
CHEM-201	Organic Chemistry	3
CHEM-301	Physical Chemistry Lecture/Lab	4

As background for the materials minor it is recommended that MATH-153 and NANO-101 be selected as coursework for two of your analytical reasoning and natural sciences general education requirements.

Mathematics

Department of Mathematics, Statistics and Computer Sciences

Teaching Certification

27 credits are required.

Twenty-two credits must be in the discipline and two credits in a teaching practicum.

Choose one option:

Option 1:

STAT-330	Probability and Statistics for Engineering and the Sciences	3
----------	---	---

Option 2:

STAT-331	Probability and Mathematical Statistics I	3
STAT-332	Probability and Mathematical Statistics II	3

Required Courses

MATH-153	Calculus I or	
MATH-156	Calculus and Analytic Geometry I.....	4-5
MATH-154	Calculus II or	
MATH-157	Calculus and Analytic Geometry II.....	4-5
MATH-158	Calculus III	3
MATH-262	Modern Geometry	3
MATH-275	Linear Algebra	3
MATH-370	Modern Algebra I.....	3
EDUC-304	Secondary Curriculum Methods and Assessment	2
EDUC-305	Secondary Student Teaching	2

Selectives

Additional courses to complete 27 credits will be selected with advisement.

Non-teaching Minor

22 credits required.

Required Courses

Select one option:

Option 1:

MATH-153	Calculus I.....	4
MATH-154	Calculus II.....	4

Option 2:

MATH-156	Calculus and Analytic Geometry I.....	5
MATH-157	Calculus and Analytic Geometry II.....	5

Selectives:

Student may select up to 6 credits from Group I:

CS-141	Computer Programming – BASIC.....	2
CS-144	Computer Science I.....	3
CS-145	Computer Science II.....	3
STAT-320	Statistical Methods.....	3

The course STAT-320 may not be included if either STAT-331 or STAT-332 is selected from Group II.

Students must select 9-14 credits from Group II:

STAT-330	Probability and Statistics for Engineering and the Sciences or	
STAT-331	Probability and Mathematical Statistics I.....	3
STAT-332	Probability and Mathematical Statistics II.....	3
MSCS-280	Graph Theory With Applications in Computer Science.....	3
MSCS-446	Numerical Analysis I.....	3
MSCS-447	Numerical Analysis II.....	3
MATH-158	Calculus III.....	3
MATH-250	Differential Equations/Linear Algebra or	
MATH-255	Differential Equations.....	3
MATH-262	Modern Geometry.....	3
MATH-275	Linear Algebra.....	3
MATH-370	Modern Algebra I.....	3
MATH-371	Modern Algebra II.....	3
MATH-450	Real Analysis I.....	3
MATH-451	Real Analysis II.....	3
MATH-460	Complex Variables With Applications.....	3

Note: Both the teaching and non-teaching minors require a grade point of 2.0 or better in all courses applied to the minor.

Mechanical and Electrical Construction

Construction Department

22 credits are required.

Required Courses

AEC-352	Building Mechanical Systems.....	3
AEC-353	Building Electrical and Control Systems.....	3
AEC-438	Contract Requirements and Specifications.....	3
AEC-455	Advanced Mechanical Systems for Building Construction.....	3
AEC-456	Advanced Electrical Construction Systems.....	3
AEC-473	Mechanical and Electrical Construction Management.....	3
AEC-499	Cooperative Educational Experience.....	2
RC-388	Construction Safety.....	2

Military Leadership

Department of Military Science

21 credits are required.

Military Science emphasis area (select 6 credits)

MSL-101	Foundations of Officership.....	1
MSL-102	Basic Leadership.....	1
MSL-201	Individual Leadership Studies.....	2
MSL-202	Leadership and Teamwork.....	2
MSL-301	Adaptive Team Leadership.....	3
MSL-302	Leadership Under Fire.....	3

History emphasis area (select 6 credits, 3 credits must be 300-level or higher)

HIST-120	Early United States History.....	3
HIST-121	Modern United States History.....	3
HIST-210	Modern World.....	3
HIST-320	History of World War II.....	3
HIST-350	History of the Viet Nam War.....	3
HIST-380	Latin American History.....	3

Human Society emphasis area (select 6-8 credits)

ANTH-220	Cultural Anthropology.....	3
FREN-201	Intermediate French I.....	4
PHIL-235	General Ethics.....	3
POLS-210	American Government.....	3
POLS-260	Problems of U.S. Foreign Policy.....	3
POLS-270	Introduction to Comparative Government.....	3
POLS-340	International Relations.....	3
PSYC-110	General Psychology.....	3
PSYC-120	Psychology of Adjustment.....	3
SOC-110	Introductory Sociology.....	3
SOC-225	Social Problems.....	3
SPAN-201	Intermediate Spanish I.....	4

Leadership and Management emphasis area (select 3 credits)

BUMGT-304	Principles of Management.....	3
BUMKG-438	Principles of Logistics.....	3
COUN-405	Introduction to Basic Counseling Skills.....	3
INMG-400	Organizational Leadership.....	3
LOG-250	Critical Thinking.....	3
LOG-301	Introduction to Logical Thinking.....	3
PSYC-382	Human Resource Management.....	3

Philosophy

Department of English and Philosophy

15 credits are required.

Required courses

PHIL-235	General Ethics.....	3
LOG-301	Introduction to Logical Thinking or	
LOG-250	Critical Thinking.....	3

Select 9 credits from the following:

PHIL-201	Introduction to Philosophy.....	3
PHIL-205	Philosophy of Religion.....	3
PHIL-215	Eastern Philosophy.....	3
PHIL-220	Multicultural Philosophy.....	3
PHIL-225	Belief, Knowledge, and Truth.....	3

Note: At least six credits in the minor must be taken at UW-Stout. A minimum grade of C is required for each course in the minor with an overall grade point average of 2.67.

Photography and Video

Department of Apparel and Communication Technologies

21 credits are required.

Required courses

PHOTO-130	Introduction to Still and Moving Image Photography	3
PHOTO-310	Introduction to Photographic Lighting.....	3
PHOTO-330	Introduction to Video Production.....	3

Selectives (Choose three of the following courses)

PHOTO-305	Photo Processes	3
PHOTO-375	Product Photography	3
PHOTO-411	Photojournalism and Documentary Photography.....	3
PHOTO-412	Nature and Landscape Photography	3
PHOTO-415	Advertising Photography	3
PHOTO-421	Architectural and Interior Photography	3
PHOTO-425	Corporate Communications and Public Relations Photography	3
PHOTO-430	Video/Cinema Practicum.....	3
PHOTO-441	Fashion and Glamour Photography.....	3
PHOTO-335	Film History and Appreciation or	
PHOTO-340	History of Photography or	
ARTH-336	Modern Art or	
ARTH-337	Art Since 1950	3

Required Capstone / Senior Project

PHOTO-495	Professional Portfolio Development	3
-----------	--	---

Physics

Department of Physics

22 credits are required.

Required Courses

Select one group from the following:

Group I:

PHYS-241	College Physics I	5
PHYS-242	College Physics II	5

Group II:

PHYS-281	University Physics I	5
PHYS-282	University Physics II.....	5

Also take:

PHYS-329	Atomic and Nuclear Physics.....	3
----------	---------------------------------	---

Selectives

Take 9 more credits of Physics, at least 6 of which are at the 300-level or higher, as approved by the minor adviser.

Plant Science

Department of Biology

20 credits are required.

Required:

BIO-242	Botany	4
---------	--------------	---

Select at least 6 credits from the following courses:

BIO-322	Plant Pathology	3
BIO-324	Vascular Plant Taxonomy	3
BIO-343	Plant Physiology	4
BIO-352	Plant Ecology	4
BIO-372	Plant Biotechnology	3

Choose one of the following capstone experience courses:

BIO-444	Problem Solving in Environmental Studies	3
BIO-470	Advanced Biotechnology	5
BIO-489	Advanced Biology	3

Choose remaining credits from selectives below:

BIO-111	Science, Society and the Environment	4
BIO-135	Organismal Biology	4
BIO-136	College Molecular Cell Biology I	5
BIO-141	Plants and People	4
BIO-332	Genetics	3
BIO-350	Ecology	3
BIO-355	Entomology	4

Project Management

Department of Operations and Management

18-20 credits are required (depending on major).

Required Courses

AEC-438	Contract Requirements and Specifications or	
BULGL-318	Business Law I	3
AEC-470	Construction Estimating II or	
BUACT-206	Introduction to Financial Accounting	3
INMGT-325	Quality Management	3
INMGT-365	Project Management or	
AEC-471	Project Scheduling	3
INMGT-400	Organizational Leadership or	
INMGT-430	Employee Involvement: Work Teams	2-3
SPCOM-210	Interpersonal Speech Communication or	
SPCOM-308	Speech Skills for Business and Industry	2
INMGT-475	Advanced Project Management.....	3

Property Management

Department of Hospitality and Tourism

25 credits are required.

Prerequisites and Foundations Courses

BUACT-206	Introduction to Financial Accounting	3
BULGL-365	Principles of Real Estate	3
PM-370	Principles of Property Management	3

Required Core

PM-358	Ethical Decision Making in Property Management	3
PM-362	Real Estate Market and Investment Analysis	3
PM-371	Management and Developing Commercial/Residential Properties	3
PM-381	Marketing and Leasing Commercial and Residential Property	3

Capstone

PM-470	Seminar in Property Management.....	4
--------	-------------------------------------	---

Psychology

Department of Psychology

18 credits are required.

Required Courses (7 credits)

PSYC-110	General Psychology	3
PSYC-190	Psychological Research Methods	4

Selectives (11 credits)

Select any PSYC course to fulfill the remaining credits.

Quality Engineering

Operations and Management Department

24 credits are required.

Required Courses

INMGT-325	Quality Management	3
INMGT-422	Quality Engineering	3
INMGT-410	Six Sigma	3
INMGT-425	Planned Experimentation	3
INMGT-440	Lean Enterprise	3
MFGE-465	Reliability Engineering	3

Selectives

Select 6 additional credits from the list supplied by the department.

Quality Management

Operations and Management Department

21 credits are required.

Required Courses

INMGT-320	Quality Assurance	3
INMGT-325	Quality Management	3
INMGT-410	Quality Six Sigma Quality Improvement Methods.....	3
INMGT-420	Quality Practicum	3
INMGT-440	Lean Enterprise	3

Selectives

Select 6 additional credits from the list supplied by the department.

Retailing

Department of Business

21 credits are required.

Required Courses

BUACT-206	Financial Accounting	3
BURTL-212	Trend Tracking and Forecasting	3
BURTL-127	Basic Merchandising	3
BURTL-327	Store Management	3
BURTL-329	Retail Promotions	3
BURTL-425	Current Retail Strategies for a Different Advantage	2
BURTL-390	Merchandise Planning and Control	4

Sociology

Department of Social Sciences

21 credits are required.

Required Courses

ANTH-220	Cultural Anthropology	3
SOC-110	Introductory Sociology	3
SOCWK-205	Introduction to Social Work.....	3

Selectives

Additional courses to complete 21 credits will be selected from the program plan sheet provided by the department.

Note: A minimum grade of C- is required for each course in the minor with an overall grade point average of 2.5 in required courses. The three required courses and at least two selective courses must be completed at UW-Stout to fulfill the residency requirement.

Spanish

Department of Speech Communication,

Foreign Language, Theatre and Music

24 credits are required.

Required Courses

SPAN-121	Practical Spanish I and	
SPAN-122	Practical Spanish II	4
	or	
SPAN-103	Elementary Spanish I	4
SPAN-104	Elementary Spanish II	4
SPAN-201	Intermediate Spanish I	4
SPAN-202	Intermediate Spanish II	4
SPAN-227	Conversation and Composition	2
SPAN-229	Hispanic Literature in America	2

4-6 additional Spanish course credits approved by the Spanish adviser.

Speech Communication

Department of Speech Communication,

Foreign Language, Theatre and Music

17 credits are required.

Required Courses

SPCOM-100	Fundamentals of Speech.....	2
-----------	-----------------------------	---

Selectives

Select 15 credits from the list supplied by the department and approved by the Speech Minor adviser to best fulfill your individual, career and academic needs.

Supply Chain Management

Business Department

22 credits required

Required Courses

INMGT-305	Resource Planning and Materials Management	3
INMGT-405	Resource Planning Practicum	3
INMGT-320	Quality Tools	3
BUMKG-337	Procurement, Sourcing and Supply Chain Management	3
INMGT-325	Quality Management	3
BUSCM-338	Principles of Logistics	3

Selectives

Select at least 5 credits from the list of courses supplied by the department.

Sustainable Design and the Environment

Biology and Engineering Departments

22-24 credits required.

Required Courses (15-16 credits)

BIO-111	Science, the Environment and Sustainability or	
BIO-141	Plants and People	4
BIO-350	Ecology	3
DES-431	System, Environment and Context or	
SUST-315	Sustainable Engineering or	
SUST-432	Global Sustainability Experience in Design and Manufacturing	3
BIO-444	Problems in Environmental Sustainability or	
SUST-425	Sustainable Design and Development Capstone	3

Choose 2-3 credits from the following:

AEC-191	The Built Environment	2
APRL-140	Textiles	3
DES-150	Introduction to Sustainable Design and Development	2
MFGE-106	Impacts of Engineering Design	2
PKG-150	Packaging Fundamentals	3
TRANS-XXX	Transportation and the Environment	3

Selectives (6-7 credits)

Choose one of the following courses:

BIO-242	Botany	4
BIO-252	Zoology	4
SUST-3XX	Renewable Energy	3

Choose one of the following courses:

ANTH-290	Global Political Ecology or	
SOC-290	Global Political Ecology	3
LIT-275	Environmental Literature	3
PSYC-281	Psychology of Sustainability	3

See adviser for a list of possible alternate selectives.

A minimum grade of "C" (2.0) is required in all courses.

Tourism

Department of Hospitality and Tourism

24 credits are required.

Required Courses

HT-140	Introduction to Tourism	2
HT-340	Development of Tourism Attractions	3
HT-240	Tourism Goods and Services	3
HT-440	Sociocultural Systems of Tourism	3
HT-341	Geography of Tourism	3
HT-360	Hospitality and the Handicapped Traveler	1

Select 4 credits from the following:

FREN-101	Elementary French I	4
FREN-102	Elementary French II	4
SPAN-103	Elementary Spanish I	4
SPAN-104	Elementary Spanish II	4

A comparable number of credits in a well-known language used in travel and trade may be substituted.

Selectives

Five credits required.

Traffic Safety Education

Risk Control Center

22 credits are required.

Required Courses

RC-271	Safety Principles and Practices or	
RC-381	Principles of Occupational Safety/Loss Control	3
RC-371	Alcohol, Drugs and Accident Prevention	3
RC-372	Behavioral Approach to Accident Prevention	3
RC-374	Driver Education Laboratory Methods and Techniques	3
RC-375	Driver and Traffic Safety	3

Select 7 credits from the following:

MEDIA-360	Introduction to Media in Education and Training	2
TECED-260	Curriculum Methods and Assessment for Technology Education	3
TECED-460	Advanced Curriculum Methods and Assessment for Technology Education	3
FCSE-201	Presentation Strategies for Family and Consumer Sciences	2
FCSE-301	Family and Consumer Sciences Education Curriculum	3
SCOUN-301	Introduction to Guidance	2
EDUC-303	Educational Psychology	3
HLTH-340	ARC Standard First Aid and Personal Safety	2
SPCOM-236	Listening	2

Web Technology

Department of Apparel and Communication Technologies

21 credits are required.

Required Courses

ICT-103	Information and Communication Technologies	3
ICT-305	Information Systems for Enterprise	3
ICT-311	Information and Communication Technologies Analytics	3
ICT-375	Web Production and Distribution	3
PHOTO-130	Introduction to Still and Moving Image Photography	3
ICT-475	Dynamic Web Technologies	3
ICT-485	Search Engine Optimization	3

Specializations

Introduction

Specializations are programs of study, with carefully constructed learning goals and experiences, and evaluation procedures. While course work may be included in a specialization, students may also work to meet learning goals through internships, working with a mentor, successfully completing a proficiency examination or certification examination, or other non-classroom experiences. Courses may come from several departments and involve faculty from several disciplines.

Courses taken to complete a specialization may also fit elsewhere in a student's program of study.

Students who complete a specialization will have the specialization recorded on their transcript and will receive a certificate of completion.

Color

Color plays a major role in our daily lives, and the color industry holds a significant sector in business. Both national and international companies conduct color research on products such as textiles, paints, cars, and clothes. Color is also a growing area with developers in community and neighborhood design and remains an important component of

marketing and packaging goods and ideas. In fact, major employers in the region hire employees to focus specifically on the color aspect of their industries. The Color specialization provides students with the opportunity to learn about the dynamic and complex field of color from a variety of disciplinary perspectives.

Requirements for the Specialization

Intended Outcome	Learning Activity	Evaluation
1. Understand the science of perception of color.	PHYS-150 The Nature and Application of Light and Color 2	Exams, papers, projects, reports, grade of C or better.
2. Understand the psychology of color cognition and human perception.	PSYC-432 Perception..... 3	Exams, papers, projects, reports, grade of C or better.
3. Understand reproduction of color in print using current technology.	GCM-367 Color Management..... 3	Exams, papers, projects, reports, grade of C or better.
4. Understand color theory with applied exercises in a studio environment and to understand how broad-reaching color theories can evolve from diverse efforts to solve specific problems.	ART-114 Color Studio..... 3 ART-414 Color Seminar..... 4	Exams, papers, projects, reports, grade of C or better.
5. Understand systematic analysis, quantification, and/or measurement of color. Choose one "systems" course:	BURL-212 Trend Tracking and Forecasting 3 CHEM-335 Instrumental Methods of Analysis 3 MFGT-204 Polymer Processes 3 MFGT-251 Polymer and Composite Processes 3 Exams, papers, projects, reports, grade of C or better. Choose one "materials" course: APRL-140 Textiles 3 APRL-145 Interior Decorating/Design Textiles 3 ART-209 Painting I 3 ART-217 Printmaking I 3	6. Understand color in an applied studio environment using varied media. Exams, papers, projects, reports, grade of C or better.

Gerontology Certification

The populations of the United States and the world are growing older, precipitating important changes in health and social policies. At present, one in eight Americans are 65 or older. These growing numbers will increase demand for individuals with gerontological skills and knowledge. The Gerontology Certification requires 20 credits, or

equivalent, and includes a required core and practicum through which students study aging as an interactive process of physical, social and psychological forces. Two credits of field experience with aging-related content will be required in the student's own major area of study.

Requirements for the Specialization

Intended Outcome	Learning Activity	Evaluation
The following outcomes will be achieved through required courses:		
1. Identify major biological theories of aging.	BIO-125 Biology of Aging..... 3	Exam, papers, reports 2.0 grade point average
2. Identify and describe the biological changes associated with aging.		
3. Recognize normal and pathological changes that occur in organ systems with age.	HDFL-340/540 Human Development: Aging Person..... 3 BIO-125 Biology of Aging.....3	Exam, papers, reports 2.0 grade point average
4. Comprehend the social, political and economic aspects of aging.	HDFL-340/540 Human Development: Aging Person..... 3	Exam, papers, reports 2.0 grade point average
5. Recognize and discard stereotypes associated with aging.		
6. Work in direct or indirect service to the older population.	Field Experience	Evaluation of field experience
The following outcomes may be achieved through the student's selection of elective courses:		
7. Understand lifespan concept of development and demonstrate an integrated knowledge of the aging individual within the context of family.	HDFL-255 Lifespan Human Development..... 3	Exam, papers, reports 2.0 grade point average
8. Understand the reciprocal nature of family caregiving.	HDFL-341/541 Family Caregiving to Dependent Elders1	Exam, papers, reports 2.0 grade point average
9. Understand the process of grief for older adults.	HDFL-425/625 Death Education and Counseling in Families.....2	Exam, papers, reports 2.0 grade point average
10. Recognize personal and cultural attitudes toward death.	HDFL-351 Death and the Family..... 1	Exam, papers, reports 2.0 grade point average
11. Identify and understand the ethical issues related to health care for the elderly.	HDFL-345/545 Health Care Dilemmas and Decisions for Families.....2	Exam, papers, reports 2.0 grade point average
12. Demonstrate ability to plan and develop nutritious meals and programs for older individuals which take into account physical and financial limitations.	FN-405/605 Nutrition for the Aged 2	Exam, papers, reports 2.0 grade point average
13. Assist aging individuals, especially those with physical limitations, to find suitable and aesthetically pleasing clothing. Understand the product needs of older consumers and the promotional strategies used to market to this population.	BURTL-335/535 Topics: Minorities and Aging Consumers 2	Exam, papers, reports 2.0 grade point average
14. Understand counseling approaches and techniques for working with aging families in order to construct models for counseling older individuals and their families.	COUN-494/694 Counseling the Older Person 2-3	Exam, papers, reports 2.0 grade point average
15. Assist older individuals and their families with financial planning.	HT-488 Financial Planning for Retirement 2	Exam, papers, reports 2.0 grade point average
16. Identify the effects of exercise upon an older individual.	HLTH-365 Physiology of Exercise 3	Exam, papers, reports 2.0 grade point average
17. Explain the psychological and physiological dimensions and impact of disability from a developmental perspective.	BIO-220 Physiology of Disabilities..... 3 REHAB-230 Psychosocial Aspects of Disability 3 REHAB-682 Sexuality and Disability..... 2	Exam, papers, reports 2.0 grade point average
18. Identify needs and difficulties unique to older disabled workers.	REHAB-355/555 Rehabilitation of the Older Disabled Worker 2	Exam, papers, reports 2.0 grade point average
19. Identify formal support systems available to older persons with special needs or national, state and local needs.	REHAB-458/658 Rehabilitation Support System Networking.....2	Exam, papers, reports 2.0 grade point average
20. Explain various understandings of the meaning of aging as portrayed in literature.	LIT-450 Aging in Literature..... 3	Exam, papers, reports 2.0 grade point average
21. Identify architectural barriers confronted by the disabled traveler.	HT-360/560 Hospitality and the Handicapped Traveler 1	Exam, papers, reports 2.0 grade point average
22. Understand the range of technological options available to assist frail and/or disabled elderly.	REHAB-360/560 Assistive Technology..... 2	Exam, papers, reports 2.0 grade point average
23. Identify and describe absorption and metabolism of medications in the elderly.	BIO-358 Introduction to Pharmacology..... 2	Exam, papers, reports 2.0 grade point average



Golf Enterprise Management

This specialization will prepare students for careers in the management of golf operations. Students will demonstrate their knowledge and skills through applied activities and assessment of theoretical principles, benefiting from the “hands on, minds on” approach to learning. The specialization will enhance degree programs in General Business Administration; Hotel, Restaurant and Tourism Management; and Service

Management as well as the professional careers of persons seeking employment in the golf industry. This specialization is supported by the golf industry to address the need for employees with knowledge of the industry and the skills required to manage the many aspects of a golf-related business.

Requirements for the Specialization

18-22 credits required.

Intended Outcome	Learning Activity	Evaluation
Students will be able to:		
Required courses: 9-12 credits		
1. Understand major trends in the golf industry, including tourism, consumer interests, course ownership and management, and golf retail business.	GEM-101 Introduction to Golf Enterprise Management 1 GEM-201 Principles of Golf Enterprise Management 3	Successful completion of required courses with a grade of “C” or better.
2. Distinguish missions of principal national and international associations in the golf industry.	GEM-101 Introduction to Golf Enterprise Management..... 1	
3. Understand golf facility operations from perspectives of resort, private, municipal, and daily fees courses.	GEM-201 Principles of Golf Enterprise Management 3	
4. Understand basic business principles as applicable to golf enterprise management.	GEM-201 Principles of Golf Enterprise Management 3	
5. Understand issues and strategies for developing new customers and retention of past customers of golf operations.	GEM-301 Customer Development, Retention and Marketing 3	
6. Develop basic golf skills.	PE-129 Golf 1	
7. Integrate the knowledge and skills obtained in the courses in the Golf Enterprise Management specialization through a practical experience in the golf industry.	XXX-XXX Co-op or field experience in a golf enterprise venue.....1-4	Successful completion of co-op or internship with a grade of “C” or better. The student will be evaluated by the employer and a faculty mentor. The student will complete a final report that provides a general overview of the golf enterprise venue including its policies and procedures, a description of the job duties performed, the relationship of the courses in the specialization to the experience and a self evaluation of performance in the position.
Based upon the selective courses chosen the student will be able to:		
Selective courses: 9-13 credits		
8. Explain the concepts of raising, allocating and controlling capital for business entities; analyze the income tax system and its relevance with business decisions; analyze financial data to make investment decisions.	BUACT-340 Business Finance..... 3	Successful completion of selective courses with a grade of “C” or better.
9. Develop a business plan that addresses the strategies required to start a small business including legal and financial aspects.	BUMGT-480 Entrepreneurship: Small Business Planning 3	
10. Demonstrate an understanding of the retail, wholesale, advertising, channels of distribution from perspectives of manufacturer to customer.	BUMKG- 330 Principles of Marketing 3	
11. Analyze the retailing process, the environment within which it operates, and the institutions and functions that are performed.	BURL-127 Basic Merchandising 3	
12. Integrate the principles of golf resort planning and operation from the aspects of the resort concept, master planning, environmental impact, facility design, maintenance and operational management.	HT-330 Resort Planning and Operation 3	
13. Evaluate diversified natural and man-made background tourism elements (BTE) and the preservation and incorporation of these concepts for development of tourism destinations.	HT-340 Development of Tourism Attractions 3	

Intended Outcome	Learning Activity	Evaluation
14. Understand management of golf club operations from perspectives of customer service for membership, personnel, marketing, and financing.	HT-352 Club Management 3	
15. Evaluate the factors involved in developing and managing a golf property including the feasibility, financing, appraisal, leases, purchase agreements and management contracts.	HT-371 Commercial/Residential Property Development and Management 3	
16. Develop interpersonal communication attitudes and skills for effective business practices.	PSYC-370 Interpersonal Effectiveness Training 2	
17. Understand consumer behavior from the perspectives of psychological theories and principles.	PSYC-377 Consumer Psychology 3	
18. Understand basic public relations strategies for community, employee, customer, and media applications.	PSYC-379 Public Relations 2	
19. Understand theories and techniques for effective management of personnel.	PSYC-382 Human Resource Management 3	
20. Examine the environment in which service operations such as golf operate from the perspective of both the customer and operations management.	INMGT-210 Service Operations Management 3	
21. Analyze the service management strategies used in the golf industry as contrasted with other economic sectors.	SRVM-354 Service Marketing Management 3	
22. Evaluate how national and cultural constraints and expectations impact planning, execution, and evaluation of service quality in the golf industry.	SRVM-420 International Service Concepts 3	



Health Science Occupations Education

This specialization is intended for licensed secondary teachers who are teaching or interested in teaching health science occupation (*HSO*) related coursework. Individual school districts determine the licensure needed by an individual teaching HSO related coursework. Comple-

tion of the specialization does not result in Wisconsin Department of Public Instruction certification. Courses are offered online. The field experience will take place in a health care facility.

Requirements for the Specialization

12 credits required

Intended Outcome	Learning Activity	Evaluation
Demonstrate knowledge, understanding, and competence in the following:		
1. The demands and responsibilities of working in a health care facility	CTE-398/598 Field Experience1-2 CTE-310/510 Foundations of Health Science Occupations Education 3	Successful completion of courses is required. Artifacts for the professional portfolio are identified on course outlines.
2. National Health Care Skill Standards	CTE-310/510 Foundations of Health Science Occupations Education 3 CTE-320/520 Careers in Health Care..... 3	Successful completion of courses is required. Artifacts for the professional portfolio are identified on course outlines.
3. Curriculum planning in health science occupations	CTE-330/530 Curriculum Planning in Health Science Occupations..... 3	Successful completion of course is required. Artifacts for the professional portfolio are identified on course outline.
4. Organizational structure and administration of health care and role of health care professionals	CTE-310/510 Foundations of Health Science Occupations Education 3	Successful completion of course is required. Artifacts for the professional portfolio are identified on course outline.
5. Student career development	CTE-320/520 Careers in Health Care..... 3	Successful completion of course is required. Artifacts for the professional portfolio are identified on course outline.
6. Organization and supervision of work-based learning	CTE-360/560 Cooperative Occupational Education Programs..... 2	Successful completion of course is required. Artifacts for the professional portfolio are identified on course outline.

International Studies

As the world moves toward the 21st century, people in all countries and cultures are increasingly interacting with each other. Many UW-Stout graduates find work in multinational businesses and international tourism. Others go into the Peace Corps or other types of international volunteer work. Many more use their leisure time for travel or study abroad. Even those who never venture abroad find their professional, civic and personal lives impacted by the expansion of international relationships.

The International Studies specialization at UW-Stout is flexibly

designed to offer students an opportunity to better understand other cultures and international relationships, and to compete more successfully in the workplace. The specialization requires all students to complete six core courses or their equivalents, then select an option that best meets their interests and needs.

All students in the specialization are strongly encouraged to plan work or study experience abroad.

Requirements for the Specialization

Intended Outcome	Learning Activity	Evaluation
1.0 Demonstrate an understanding of international relations. 1.1 Show an understanding of concepts used to analyze international relations. 1.2 Identify participants and patterns of international relationships. 1.3 Identify and analyze global problems arising from international relations.	POLS-340 International Relations 3	Exams, papers and reports – 2.0 grade point average.
2.0 Demonstrate an understanding of cultural variation and analysis, or demonstrate an understanding of the modern world within its historical context. 2.1 Show an understanding of concepts used to analyze cultural variation or develop an introductory knowledge of the modern world based on its historical antecedents. 2.2 Identify and begin to understand the complexity of cultural and political variations that exist in the world. 2.3 Demonstrate a cross-cultural approach to analyzing international problems.	HIST-210 Modern World 3 ANTH-220 Introduction to Cultural Anthropology or	Exams, papers and reports – 2.0 grade point average.
3.0 Demonstrate an understanding of the geography and peoples of the world. 3.1 Illustrate an understanding of geographical concepts. 3.2 Identify the major components of the physical setting in which cultures exist and international relations occur.	3.3 Identify and analyze the relationships between the physical world, on the one hand, and cultural variation and international relations on the other. GEOG-104 World Geography..... 3	Exams, papers and reports – 2.0 grade point average.
4.0 Demonstrate an introductory knowledge of a second language.	XXX-XXX Language Studies 8 Equivalent of 8 credits of college-level study of one foreign language. High school language study may count towards this requirement. (<i>International students consult with specialization adviser.</i>)	<i>For Language Studies, certification of proficiencies may be obtained from the language faculty.</i>
5.0 Demonstrate an introductory knowledge of the history, culture and/or social institutions of a country or region other than one's own.	XXX-XXX Area Studies 2-3 (See specialization advisor for a list of acceptable courses focusing on one country or cultural region of the world.)	Exams, papers and reports – 2.0 grade point average.
6.0 Demonstrate an introductory knowledge of intercultural communications.	SPCOM-312 Intercultural Communication or BUINB-346 Intercultural Business Interactions..... 2-3	Exams, papers and reports – 2.0 grade point average.
7.0 Demonstrate the integration of knowledge with experience in another country or culture. 7.1 Study or work in another culture. 7.2 Show an appreciation of the diversity in cultural values from culture to culture. 7.3 Demonstrate an integration of intercultural experiences with other knowledge about international relations.	XXX-XXX Study Abroad/International Field Experience or Co-op or Internship1-2 (Approved Independent Study/Practical International Experience.)	Exams, papers and reports – 2.0 grade point average.



Specialized Learning Objectives	Learning Activity	Evaluation
Option 1: International Business		
1.1.0 Demonstrate an understanding of international business practices.	Select 9 credits from the following:	Exams, papers and reports – 2.0 grade point average.
1.1.1 Demonstrate an understanding of international trade, development, marketing, finance business law, management and/or transportation.	BUINB-260 Introduction to International Business (required) 3 ECON-480 International Economics..... 3 BUINB-338 International Logistics..... 3 BUINB-485 International Marketing..... 3 BUINB-489 International Business Policies 3 BUINB-488 International Business Practicum..... 3 BUINB-367 International Management 3	
Option 2: International Tourism		
2.1.0 Demonstrate a knowledge of the international components of the tourism industry.	Select 7-9 credits from the following:	Exams, papers and reports – 2.0 grade point average.
2.1.1 Identify the economic role of tourism in a global economy.	HT-140 Introduction to Tourism 2	
2.1.2 Identify the role of government in planning/development of tourism.	HT-341 Geography of Tourism 3	
2.1.3 Analyze current issues related to international tourism.	HT-440 Sociocultural System of Tourism 3	
2.1.4 Analyze/become familiar with hospitality and tourism publications.	HT-481 Special Problems in Hospitality and Tourism1-3	
2.2.0 Assess quality and quantity of selected tourism resources throughout the world.		
2.2.1 Analyze spatial patterns of connection, circulation, interaction, transportation and communication associated with the geography of tourism.		
2.2.2 Analyze international tourism's locational trends.		
2.2.3 Illustrate world map reading skills related in tourism		
2.3.0 Analyze current tourism topics.		
Option 3: Language Studies		
3.1.0 Demonstrate the ability to communicate in a second language.	Select 16 credits from the following: (8 additional credits in the same language as the core requirement.) Equivalent of two years of college-level study in the same foreign language.	Exams, papers and reports – 2.0 grade point average.
Option 4: Area Studies		
4.1.0 Demonstrate an understanding of the history, cultural background and social institutions of a culture, country or region other than one's own.	Select 8-9 credits in addition to the core area studies requirement: Specialization adviser-approved courses focusing on one country, one ethnic/cultural group or cultural region of the world. (For example, the following courses could serve as an "area studies" grouping: HMON-121 and -122 Practical Hmong I and II; SOC-350 Sociology of the Hmong; and ANTH-240 Hmong Studies and Contemporary Life. These courses would total 8 credits.)	Exams, papers and reports – 2.0 grade point average.
Option 5: International Education		
5.1.0 Illustrate an understanding of the sociopolitical elements of education in a global context.	Select 8-9 credits from the following:	Exams, papers and reports – 2.0 grade point average.
5.2.0 Demonstrate an understanding of the role of education in building a community of learners for a shared global future.	EDUC-336 Multiculturalism: Issues and Perspectives 2	
5.3.0 Show a receptivity to multicultural perspectives.	EDUC-376 Field Experience: Cross-Cultural Experience..... 1	
5.4.0 Demonstrate an awareness and understanding of the global condition and of global developments and trends.	EDUC-302 Global Perspectives for Educators..... 3	
	EDUC-400 ESL for Regular Classroom Educators 2	
	REHAB-305 Sign Language I 3	
	REHAB-306 Sign Language II 3	
	XXX-XXX Foreign language taken at Stout (FREN, GER, HMON, SPAN) or other foreign languages transferred in2-4	
	LIT-273 American Multicultural Literature 3	
	PHIL-220 Multicultural Philosophy 3	
	BUINB-260 Introduction to International Business..... 3	
	SOC-375 Sociology of Minority Groups..... 3	
	XXX-XXX Student teaching, co-op, field experience or independent study..... 3-4	
Option 6: Apparel Design and Development; Retailing		
6.1.0 Demonstrate an understanding of international economic trends influencing textiles and apparel-related areas.	Select 9-12 credits from the following:	Exams, papers and reports – 2.0 grade point average.
6.2.0 Illustrate an understanding of international historical influences on present day fashion	BURL-319 International Economic Trends in Textiles and Clothing..... 3	
6.3.0 Analyze international sourcing and marketing strategies for apparel products and manufacturing.	APRL-410 History of Costume-Ancient to European 3	
6.4.0 Demonstrate an understanding of international business practices through formal course work.	APRL-211 History of Fashion_19th Century to Present 3	
	BURL-417 Social/Psychological Aspects of Clothing 3	
	APRL-405 International Study Tour of the Fashion Industry1-6	
	BUINB-260 Introduction to International Business..... 3	
	BUINB-367 International Management 3	
	BUINB-485 International Marketing..... 3	

Professional Writing

The Professional Writing specialization addresses an area of critical importance in business and industry: communicating information clearly and precisely. The specialization is intended for those who wish to gain professional writing skills to help them find employment and those who wish to improve their writing skills to gain promotions or

explore new career directions. Graduates of the Professional Writing specialization will be able to clarify technical concepts for a wide range of audiences, especially non-technical ones. This specialization can be completed entirely online.

Requirements for the Specialization

Intended Outcome	Learning Activity	Evaluation
1. Understand and implement basic professional writing concepts and strategies.	<i>ENGL-415 is a required course for the Professional Writing specialization and is a prerequisite for many upper level courses. Students must take this course during their first semester of work in the Professional Writing specialization.</i> ENGL-415/615 Technical Writing 3	Demonstrated successful course completion.
2. Interact with clients to produce their documents. Follow a sequence of activities, under supervision, to produce a document, starting with an initial interview and progressing to a final document.	<i>Take three credits from the following:</i> ENGL-121 Introduction to Technical Communication 3 ENGL-210 Journalism Practicum (not offered online) 1 ENGL-349 Cooperative Education in Liberal Studies1-8 ENGL-437/637 Technical Writing Practicum1-3 ENGL-471 Technical Communication and Consulting 3	Demonstrated successful course completion.
3. Design documents according to client specifications. Learn basic principles of document design. Determine client's design needs. Produce document.	<i>Take three credits from the following:</i> ENGL-361 Hypertext Writing 3 ENGL-385 Document Design 3 ENGL-435/635 Writing Technical Manuals 3	Demonstrated successful course completion.
4. Adapt, direct, and produce information for a particular audience with particular technologies. Structured sequence of activities that train students in concepts of audience adaptation and develop flexibility in adapting to audience.	<i>Take three credits from the following:</i> ENGL-388 Writing Multimedia 3 ENGL-361 Hypertext Writing 3 ENGL-425 Usability Design and Testing 3 ENGL-430 Writing for Content Management 3	ENGL-435/635 Writing Technical Manuals 3
Demonstrated successful course completion.	emphasis on rhetorical context and strategy. Structured sequence of activities that train students in organizing for a particular audience situation. <i>Take three credits from the following:</i> ENGL-247 Critical Writing 3	ENGL-343 Rhetoric of Technology 3 ENGL-371 Advanced Rhetoric
Demonstrated successful course completion.	flexibility. <i>Take three credits from the following:</i> ENGL-125 Professional Writing Elements of Style 3 ENGL-207 Writing for the Media 3 ENGL-225 Editing Processes and Practices 3	(Prerequisite for ENGL-225: Test out or take ENGL-125)
5. Organize and present written material in a clear, concise manner with an		
6. Produce information according to business and industry standards of style. Structures sequence of activities that train students in style concepts and		



Training and Human Resource Development

Education is not the sole province of schools. Programs of instruction are conducted by many businesses, industries, in the military, and by other groups and organizations. Planning and providing this instruction is the province of professionals usually identified as "trainers." In our technological society, training programs have become increasingly complex and demands on trainers have increased. Greater expertise on their part is required. This all-university specialization addresses

needs for preservice and in-service education for trainers.

This program is intended for students who have expertise in areas such as engineering, technology, education, business, government, military and labor, and who desire to become involved in development and implementation of training programs. Contact the specialization director for further information.

Requirements for the Specialization

Note: Courses numbered 700 and greater are open to graduate students only.

Intended Outcome	Learning Activity	Evaluation
1. Introduction to concepts of training and human resource development.	TRHRD-360/560 Training Systems in Business and Industry 3 Select one of the following: INMG-T-400/600 Organizational Leadership or PSYC-382/582 Human Resource Management 3	Successful completion of courses at left (6 credits).
2. Design and develop training activities.	MEDIA-360/560 Introduction to Media in Education and Training..... 2 Complete a course from the appropriate school in curriculum development or course construction (2-3 credits) such as: MEBE-401 Marketing Education Curriculum 2-3 CTE-438/638 Course Construction for Vocational Educators..... 2	Successful completion of courses at left (minimum 4 credits).
3. Implement and facilitate training activities.	Select one of the following: MEBE-301 Marketing Education Methods 3-4 TRHRD-370/570 Training Methods in Business and Industry 2 CTE-405/605 Methods of Teaching Vocational Education 2	Successful completion of a course at left (minimum 2 credits).
4. Evaluate the effectiveness of training activities.	CTE-440/640 Instructional Evaluation in Vocational Education 2	Successful completion of the course at left (2 credits).
5. Apply concepts of training in the professional area.	TRHRD-XXX Co-op/Internship in Training1-8	Successful completion of the contractual agreement of the internship as evaluated by the business, industry, government or military supervisor, and the UW-Stout supervisor. Completion of a field report is required.

Vocational Evaluation/Rehabilitation Technology

The impact of technology has changed assessment and service delivery in the field of rehabilitation. A philosophical shift to a more empowering stance with persons with disabilities has occurred as a result of the evaluation of their skills and abilities and the enhancement of those skills through assistive technology. This specialization educates and

trains vocational rehabilitation professionals and students in skills to meet the needs of people with disabilities, and to provide the services that are being demanded by employers, as well as persons with disabilities for use in the labor market and in accordance with the Americans with Disabilities Act.

Requirements for the Specialization

Intended Outcome	Learning Activity	Evaluation
Development of tool modification and accommodation: demonstrate familiarity with and use of testing accommodations or modifications to facilitate the vocational exploration of persons with disabilities through the modification of tests, work samples, job sites and training materials, as appropriate.	<p>"The Use of Assistive Technology" workshop, resulting in a report detailing the use and modification of testing strategies <i>or</i></p> <p>REHAB-360/560 Assistive Technology..... 2</p>	<p>Faculty review and approval of report on use and modification of evaluation tools <i>or</i></p> <p>Grade of "C" or better</p>
Communication of rehabilitation plan objectives and recommendations: demonstrate the ability to incorporate the potential of assistive technology to enhance performance potential in the vocational choices of persons with disabilities.	<p>"The Use of Assistive Technology" workshop, resulting in reports that include recommendations for the use of assistive technology <i>or</i></p> <p>REHAB-360/560 Assistive Technology..... 2</p>	<p>Faculty review and approval of report on use and modification of evaluation tools <i>or</i></p> <p>Grade of "C" or better</p>
Vocational rehabilitation process and philosophy: outline and describe philosophical movements associated with vocational rehabilitation in the United States, describe the role of vocational rehabilitation/assessment in a diverse cultural environment, and describe the need that persons with disabilities have to be a part of society, focusing on strengths and assets that people bring with them to any situation.	<p>Research paper describing process and philosophy <i>or</i></p> <p>Demonstrated work experience of three or more years and professional development credentials <i>or</i></p> <p>REHAB-101 Introduction to Rehabilitation 3</p>	<p>Faculty review and approval of research paper or work experience and professional credentials <i>or</i></p> <p>Grade of "C" or better</p>
Occupational Information: find and use various sources of national, state and local occupational information; link rehabilitation recommendations to the local labor market of the person being served.	<p>Demonstrate work experience as a job developer or placement specialist of two or more years <i>or</i></p> <p>"Job Development and Placement and Occupational Information" workshop resulting in appropriate work recommendations in a written report <i>or</i></p> <p>REHAB-310 Vocational Evaluation <i>or</i></p> <p>REHAB-410 Job Placement 3</p>	<p>Faculty review of work experience or faculty review and approval of report recommendations <i>or</i></p> <p>Grade of "C" or better</p>
Functional aspects of disability: develop knowledge of the functional characteristics of disability and understand the impact of evaluating the skill and abilities of a person with a disability.	<p>Research paper on effect of disabling condition(s) in vocational rehabilitation <i>or</i></p> <p>Test out with faculty-developed standardized test <i>or</i></p> <p>REHAB-230 Psychosocial Aspects of Disability 3</p>	<p>Faculty review and approval of research paper <i>or</i></p> <p>80 percent or better on the standardized test <i>or</i></p> <p>Grade of "C" or better</p>
Individualized vocational rehabilitation/evaluation planning: identify and delineate the individual needs of a person with a disability; state those needs in a plan for testing skills and abilities in relation to the accomplishment of a task or goal.	<p>"Rehabilitation Planning" workshop resulting in written vocational rehabilitation plan <i>or</i></p> <p>Work experience of two or more years, one letter of reference from a supervisor, three letters of reference from professional referral sources, and five letters of reference from consumers of services <i>or</i></p> <p>REHAB-310 Vocational Evaluation..... 3</p>	<p>Faculty review and approval of written rehabilitation plan of three separate case studies provided during workshop <i>or</i></p> <p>Faculty review and approval of work experience and letters of reference <i>or</i></p> <p>Grade of "C" or better</p>
Vocational interviewing: demonstrate the development of rapport, provision of agency and assessment information, initial identification of client strengths and limitations through the vocational interview; and create an understanding of the process of vocational rehabilitation through the vocational interview.	<p>"Vocational Interviewing and Facilitating Career Decision Making with Clients" workshop resulting in the videotaping of a vocational interview <i>or</i></p> <p>Demonstrate evidence of past work experience as a vocational counselor for two or more years <i>or</i></p> <p>Complete college level course work in vocational interviewing</p>	<p>Faculty review and approval of videotaped vocational interview <i>or</i></p> <p>Faculty review and approval of work experience <i>or</i></p> <p>Faculty review and approval of college level course work</p>
Vocational report development and communication: interpret, analyze, and synthesize participant data in a coherent and concise manner that addresses needs, strengths, and assets of the participant and develops pertinent recommendations through a report shared orally and in writing with the participant/client and referral source/rehabilitation counselor.	<p>"Vocational Rehabilitation Report Development and Communication" workshop <i>or</i></p> <p>Four written reports addressing needs of four case studies presented during the workshop <i>or</i></p> <p>REHAB-310 Vocational Evaluation..... 3</p>	<p>Faculty review and approval of the written report options and letters of reference <i>or</i></p> <p>Grade of "C" or better</p>

Intended Outcome	Learning Activity	Evaluation
Standardized testing: become familiar with the procedures for administering and interpreting standardized tests and application of tests to persons with disabilities, understand the impact of the disabling condition and the use of the most appropriate test, and develop a report explaining the impact of testing and using results with a vocational rehabilitation report.	Previous college course work in the use of psychometric testing and principles of validity and reliability <i>or</i> “Standardized Testing” workshop and paper describing use of standardized tests with persons with disabilities <i>or</i> Past work experience of two years or more where responsibilities include administering and interpreting standardized tests with a supervisor’s letter and at least one referral source/rehabilitation counselor <i>or</i> REHAB-420/620 Psychological Testing – People with Exceptional Need..... 3	Faculty review and approval of previous course work <i>or</i> Faculty review and approval of workshop paper <i>or</i> Faculty review and approval of work experience and letters of recommendation <i>or</i> Grade of “C” or better
Job and Training Analysis: perform a job analysis and develop a training analysis on a given job and do a written report; use the job analysis to determine the most appropriate evaluation tools to use with a person with a disability to measure performance ability; determine appropriate training or education to prepare for the job.	Read <i>A Guide to Job Analysis</i> or <i>The Revised Handbook for Analyzing Jobs</i> , participate in an online discussion of the materials and procedures of job analysis, select a job in the community that reflects occupational choices of agency participants, prepare a job analysis report, select and describe evaluation tools most appropriate for someone interested in the occupation <i>or</i> REHAB-410 Job Placement 3	Faculty review and approval of the job and training analysis report and online discussion <i>or</i> Grade of “C” or better
Functional Skills: use appropriate tools and strategies to evaluate the functional daily living skills of an individual with a disability, select appropriate method to determine level of functional skill, develop and use situational assessment to establish an understanding of the individual functional skills of a person with a disability.	“Functional Skills Assessment” workshop and report <i>or</i> Demonstrate evidence of past work experience of two or more years involving vocational evaluation/ functional skills assessment and/or situational assessment with two letters of reference from referral sources <i>or</i> REHAB-470/670 Work Adjustment Services..... 3	Faculty review and approval of report <i>or</i> Faculty review and approval of work experience and letters of reference <i>or</i> Grade of “C” or better
Assessment of Learning: demonstrate awareness of learning styles and modalities of teaching through use of selected tests, modify test administration to the demands of the learning/teaching situation.	Previous college-level course work in educational psychology, special education, adult or vocational education that address issues of learning and learning styles and use of learning assessments <i>or</i> Paper describing learning styles and assessment of such styles, with assessment tool selection and modification	Faculty review and approval of course work <i>or</i> Faculty review and approval of paper
Work samples and work sample systems: demonstrate appropriate use of work samples and work sample systems as means of assessment within a given occupation, demonstrate appropriate use of work samples and systems with different types of disabling conditions.	“Work Sample and Work Sample Systems” workshop and research paper <i>or</i> REHAB-310 Vocational Evaluation..... 3	Faculty review and approval of research paper <i>or</i> Grade of “C” or better
Behavioral Observation: observe and note behaviors of individuals during the assessment process as asset or limitation behaviors in relation to the accomplishment of a target goal.	Read appropriate, assigned material and develop a written behavior observation of five clients where observations were critiqued by at least two other professionals, including the referring counselor <i>or</i> Demonstrate evidence of work experience in vocational rehabilitation/evaluation where duties included writing and/or noting behavioral observations, with a letter from a supervisor and two from referral sources attesting to accuracy and usability of the written behavioral observations, including examples of written behavioral observations	Faculty review and approval of observations, critiques and reports <i>or</i> Faculty review and approval of work experience, letters of reference, and examples of written behavioral observations

Professional Development Certificates

Introduction

UW-Stout offers professional development certificate programs in addition to its traditional majors and minors to meet the needs of those who wish to obtain additional knowledge and skills needed for personal growth and professional advancement.

While not a substitute for a degree or diploma, the certificate is an alternative credential for individuals seeking to obtain new knowledge and skills or to update their knowledge and skills in a specific area. Typically, a certificate is earned by completing a set of limited, well

defined learning outcomes focused on new or emerging processes or new knowledge and principles applied to practical problems or issues.

These course sets lead to a certificate only. If you're interested in a bachelor's degree, please refer to the degree programs found elsewhere in this bulletin.

Additional information about professional development certificate programs is available online at www.uwstout.edu/programs/pdc.

Applied Ethics

The Applied Ethics certificate is designed to empower professionals to apply ethical theory and reasoning in the workplace. The "ethical workplace" has emerged as an attainable ideal; understanding that ethics underscores all personal and professional interactions is essential to leaders in every profession.

Our approach is to bridge disciplines and professions in a systematic exploration and analysis of ethical issues facing individuals across professions and cultures. The program provides a core which introduces students to ethical principles, frameworks, and models. Courses cover engagement in ethical debate in a multicultural and globally diffused environment, encouragement of individual, professional, and civic responsibility to promote ethical leadership and enables students to provide coherent and compelling reasons justifying personal ethical stances and decisions.

Twelve credits are required for the Certificate. Students must maintain a "C" or higher in each of the four courses in order to be given credit toward the certificate.

PHIL-235	General Ethics	3
XXX-XXX	Capstone Experience	3

Students will choose 6 additional credits from an approved listing to complete certificate requirements. See the website at www.uwstout.edu/programs/pdc/ae.cfm.

Autism Spectrum Disorder Specialist

The Autism Spectrum Disorder Specialist certificate is designed to provide teachers, counselors, and other professionals with specialized training in working with students with autism. Graduates possess skills needed to assess students with ASD, implement individualized interventions, and evaluate programs for effectiveness.

SPED-472/672	Foundations of Autism	3
SPED-473/673	Behavior Interventions and Positive Behavior Supports	3
SPED-474/674	Augmentative Communication and Social Skills	3
SPED-475/675	Assessment and Methodology of Autism Spectrum Disorders ...	3

Cisco Certified Network Associate Exam Preparation Certificate

The Cisco Certified Network Associate (CCNA) Exam Preparation Certificate prepares students to pass examinations through the use of lecture, online curriculum, and laboratory exercises. In order to earn the certificate, students must pass the following courses and professional exams:

ITM-131	Network operating System Fundamentals	2
ITM-141	Networking Fundamentals I	2
ITM-142	Networking Fundamentals II	2
ITM-143	Networking Fundamentals III	2
ITM-144	Networking Fundamentals IV	2
Exam: Cisco CCNA		

Cisco Certified Network Professional Exam Preparation Certificate

The Cisco Certified Network Professional (CCNP) Exam Preparation Certificate prepares students to pass examinations through the use of lecture, online curriculum, and laboratory exercises. In order to earn the certificate, students must pass the following courses and professional exams:

ITM-441/641	Scalable Internetworks	3
Exam: Cisco Routing		
ITM-442/642	Remote Access Networks	3
Exam: Cisco Remote Access		
ITM-443/643	Multi-Layer Switched Networks	3
Exam: Cisco Switching		
ITM-444/644	Internetwork Troubleshooting	3
Exam: Cisco Support		

Creative Writing

The Creative Writing Certificate provides participants with expertise in areas of effective creative writing to meet a range of written communication and problem solving responsibilities in business, industry, and education. Participants must complete the following courses with a B or better to earn the certificate:

Tier One – Required

ENGL-245	Creative Writing.....	3
ENGL-342	Creative Writing II.....	3

Tier Two – Choice of two courses

ENGL-356	Creative Writing Workshop (<i>repeatable</i>):	
	1) Advanced Fiction Writing	
	2) Advance Poetry Writing	
	3) Advanced Creative Nonfiction Writing.....	6

Tier Three – Choice of one

ENGL-371	Rhetoric and Style: Strategies of Augmentation or	
ENGL-388	Writing for the Internet	3

Tier Four – Capstone Seminar

ENGL-471	Technical Communication and Consulting	3
----------	--	---

Enterprise Technology

Enterprise technologies are umbrella systems with common data organization, storage, and data analysis tools interconnected through a computing network. The certificate provides participants with knowledge of the uses and impacts of enterprise technology in accordance with contemporary business practices. Professionals develop relevant understanding of policy, issues, and standards and implications on national and global communities.

ICT-305/505	Information Systems for Enterprise	3
ICT-401/601	Information Technology Policy and Audit	3
ICT-405/605	Enterprise Technology Seminar	3

Event and Meeting Management

The Event and Meeting Management certificate is designed to teach the skills and knowledge base necessary to be successful in the events and meetings industry. The certificate will help students understand the key areas of the industry and to possess the knowledge to manage meetings, events, and trade shows. The certificate will set the ground work for students and professionals working towards the Certified Meeting Professional (CMP) designation.

HT-357/551	Hospitality Convention/Meeting Planning	3
HT-442/642	Trade Show Management	3
HT-445/645	Event Management or	
GEM-445/645	Event Management	3
HT-447/647	International Convention and Meeting Management ...	3

Human Resource Management

The Human Resource Management certificate program provides a broad base of knowledge to professionals seeking to expand their management competencies. The coursework is essential to prepare for the Professional Human Resource (PHR) exam, developed by the Society for Human Resource Management (SHRM) and recognized nationally as a significant credential for professional advancement in human resources. Competencies required by human resources professionals are best defined by content of the SHRM examination, and they are the same competencies covered in the coursework required for the certificate. The certificate in no way implies or guarantees that the student will pass the exam but should be seen as an important professional accomplishment.

The following courses provide the student with knowledge in all of the tested areas:

PSYC-381/581	Industrial Psychology	2
PSYC-382/582	Human Resource Management.....	3
PSYC-403/603	Management of Employee Reward Systems	3
PSYC-485/685	Recruitment and Selection of human Resources	3
TRHRD-360/560	Training Systems in Business and Industry.....	3
ECON-421/621	Collective Bargaining and Labor Relations.....	2
RC-381/581	Occupational Safety/Loss Control.....	2-3

Quality Management

The certificate program is designed to provide technical and professional responsibility at the Sigma Six Green Belt level to those in industry. Students in this program are prepared for the American Society for Quality (ASQ) Six Sigma certification through examinations upon completion of a project through their organizations.

INMGT-320/520	Quality Tools.....	3
INMGT-325/525	Quality Management	3
INMGT-410/610	Six Sigma Quality Improvement Methods	3

Supply Chain Management

The Supply Chain Management certificate provides students with expertise to assume, concurrently with other technical and professional responsibilities, the management of components within their supply chain. Course work coincides with American Production and Inventory Control Society objectives for its certification examination.

INMGT-305/505	Production and Inventory Control.....	3
INMGT-405/605	Production and Inventory Control Practicum	2
INMGT-320/520	Quality Tools.....	3
BUMKG-337/537	Purchasing and Supply Chain Management	3
INMGT-325/525	Quality Management.....	3
BUSCM-338/538	Principles of Logistics	3

Selectives

Select at least 5 credits from the list of courses supplied by the department.

Sustainable Enterprise Management

The Sustainable Enterprise Management professional development certificate focuses on the relevant and applicable knowledge needed to assist organizations to be profitable while contributing to environmental sustainability and social responsibility.

The certificate is designed to provide a professional learning experience for individuals interested in expanding their expertise in sustainable business. The 15 credit certificate includes the following courses:

SMGT-230	Triple Bottom Line Accounting for Managers	3
SMGT-235	Economics in Society and Sustainability	3
SMGT-331	Sustainable Organizational Finance	3
SMGT-355	Management and Environmental Information Systems or	
SMGT-350	Operations Management and Sustainability	3
SMGT-430	International Management for a Sustainable World	3

Sustainable Management Science

The Sustainable Management Science Certificate focuses on improving sustainability in the workplace and strengthening the larger community through increased environmental awareness, productivity, and efficiencies.

The certificate is designed to provide a professional learning experience for individuals interested in expanding their expertise in areas such as energy, waste management and natural resource management. The 12 credit certificate includes the following courses:

SMGT-310	Ecology for Sustainable Management	3
SMGT-315	Global Environmental Chemistry	3
SMGT-320	Energy for Sustainable Management	3
SMGT-325	Natural Resource Management	3

Web Technology

The certificate provides participants with the knowledge needed to have a broad understanding of how to plan, develop, implement and evaluate standards based websites and strategies for their success. Professionals develop relevant understanding and use of information and communication technologies to increase the probability that the targeted end users are able to find and access the information or services they are seeking, and organizations are able to track the use and performance of their content through actionable data.

ICT-311/511	Information and Communication Technologies Analytics	3
ICT-375/575	Web Production and Distribution	3
ICT-475/675	Dynamic Web Technologies	3
ICT-485/685	Search Engine Optimization	3

Women and Gender Studies

This certificate introduces students to concepts crucial to the study and application of knowledge in the field of women and gender studies as they enter a highly competitive job market. Certificate recipients will be able to apply and articulate interdisciplinary knowledge specific to women and gender studies such as social construction of gender in relation to such factors as race, ethnicity, class, sexuality, disability, and age.

WGS-210	Introduction to Women Studies	3
HIS-321	U.S. Women's History	3
SOC-275	Sociology of Gender Roles	3
ANTH-356	Women in Cross Cultural Perspectives	3

Workplace Diversity

The Workplace Diversity certificate is designed to assist managers and HR professionals in dealing with an ever more diverse workforce. This program is designed to show managers how to capitalize on this diverse workforce and improve long term organizational success by bringing fresh ideas and new perspectives to the world of work.

Our approach is focused upon how individuals and groups can use their differences to become more creative and resilient. Courses focus on issues like changing Human Resource Practices and organizational change methods that will bring effective change and a sense of inclusion to the organization. The program also includes courses about unique features of specific minority groups, their culture and histories, to sensitize the student to cultural differences. Specifically, the program focuses on differences in: race and ethnicity, gender identity, age, disability, religion and sexual orientation.

1. Foundation

PSYC-XXX	Foundations of Workplace Diversity	3
SPCOM-312	Intercultural Communications	3

Choose one course from Area 2 and one course from Area 3.

2. Ethnicity/Race

PSYC-340	Psychology of Individual and Group Differences	3
HIST-322	African-American History	3
HDFS-275	Race Matters: Interdisciplinary Investigations	3
EDUC-336	Multiculturalism: Issues and Perspectives	3

3. Gender

INMGT-415	Inclusivity in Management	3
SOC-275	Sociology of Gender Roles	3
HIST-321	U.S. Women's History	3
HDFS-350	Women's Relationships in Later Life **	3
SRVM-120	Gender in Service Management	3
WGS-210	Introduction to Women and Gender Studies	2

Choose a course from two of the following areas (4-7):

4. Age

HDFS-347	Ethics in Aging	2
HDFS-340	Human Development: Late Adulthood	3
HDFS-350	Women's Relationships in Later Life **	3
REHAB-355	Rehabilitation of the Older Disabled Worker	2

5. Disability

REHAB-230	Psychosocial Aspects of Disability	3
HT-360	Tourism for Persons with Disabilities	2

6. Religion

XXX-XXX	Religious Issues in the Workplace	3
---------	---	---

7. Sexual Orientation (LGBTQ)

HDFS-352	Sexual Minority Individuals and Families	2
----------	--	---

8. Capstone (required)

PSYC-XXX	Applied Diversity Organizational Strategies	3
----------	---	---

** HDFS-350 may only be taken to count toward one area.

UNDERGRADUATE BULLETIN COURSE DESCRIPTION INTRODUCTION

Course descriptions are listed (in this section) in alphabetical order by curricular subject abbreviations. Undergraduate courses are those numbered from 100 through 499. All numbers above that are for graduate credit.

General Education, Racial and Ethnic Studies and Global Perspective Requirements

This section describes the purpose of and outlines the requirements of each of these course categories.

Each degree program has a general education component designed to provide you with knowledge and skills in communication, analytic reasoning, natural sciences, arts, humanities, social and behavioral sciences, contemporary issues, social responsibility and ethical reasoning. The university also requires students to take courses to learn about the diverse cultures that make up the United States. With careful planning, some of the general education courses and racial and ethnic studies courses may overlap. That is, you may take a course that meets both general education and racial and ethnic studies requirements. While the credits you earn count once toward graduation, they may be used to satisfy requirements in these two areas. The global perspective requirement for undergraduates stems from the goals of UW-Stout's distinctive mission and array of programs that combine theory, practice and experimentation.

General Education Credit Distribution

Communication Skills » 9 credits

- ENGL-101 Composition I **or**
ENGL-111 Freshman English – Honors I
- ENGL-102 Composition II **or**
ENGL-112 Freshman English – Honors II **or**
ENGL-113 Honors Seminar I
- SPCOM-100 Fundamentals of Speech

Analytic Reasoning and Natural Sciences » 10 credits

Courses must be from the areas of analytic reasoning and natural sciences. At least one mathematics or statistics course and a natural science course with a lab are required.

Arts and Humanities » 6 credits

Courses must be from two or more areas including art history, creative arts, foreign language and culture, history, literature, music appreciation, performing arts, and philosophy.

Social and Behavioral Sciences » 6 credits

Courses must be from two or more areas including anthropology, economics, geography, political science, psychology and sociology.

Contemporary Issues » 3 credits

Courses must be selected from the list of approved contemporary issues courses, which includes technology.

Social Responsibility and Ethical Reasoning » 3 credits

Courses must be selected from the list of approved social responsibility and ethical reasoning courses, which includes health, health education, and athletics.

Selectives » 3 credits

Courses/credits may be selected from any category to meet the 40-credit requirement.

Some degree programs have specific general education courses that must be taken in order to satisfy certification, accreditation or prerequisite standards. These exceptions are noted in the general education requirements of each program.

Lists of the general education courses in each category are available online. In the course description listing in this bulletin, general education courses are identified by category.

Racial and Ethnic Studies Requirements

The Racial and Ethnic Studies requirement is six credits with a minimum of three credits from **RES-A**. Each student must satisfy the racial and ethnic studies requirement as preparation for being an engaged citizen in a highly diverse society. Racial and ethnic studies courses prepare students for being engaged citizens in a highly diverse society and to come to appreciate, understand, value and respond respectfully to cultural diversity. Through the study of U.S. cultures other than those from a European origin, we hope to discourage racism and thus reduce its effects. An important emphasis is critical reflection and application of acquired learning to professional and personal contexts. Lists of the racial and ethnic studies courses in each category are available online. Transfer students who have fulfilled the racial and ethnic studies requirement at another UW System university are exempt from meeting UW-Stout's criteria.

Global Perspective Requirement

Both the globalization of work and the career education that is part of UW-Stout's mission make it desirable that students appreciate cultural, economic, political, environmental and social differences. Learning a second language at the college level and developing an understanding of another culture provides students with skills they will use in international situations. To earn a bachelor's degree, students who started Fall 2010 or later must fulfill a global perspective requirement by:

- Completing a program of university-approved work or study abroad, or
- Completing six credits of courses approved as fulfilling the global perspective requirement.

Interpreting Course Descriptions

This document will help you understand the various codes used in the course descriptions that follow.

A typical course description in the Undergraduate Bulletin appears like this:

LIT- 273 American Multicultural Literature (3.00 cr.)

Literature, Racial & Ethnic Studies Category A

Repeatable: No

American multicultural literature, focusing on Hispanic, African, Asian, and Native American writers.

Prerequisite: take either ENGL-101 or ENGL-111.

and is comprised of the following components, in order:

Subject Area Code

AEC Architecture, Engineering and Construction

ANTH Anthropology

APRL Apparel Design/Manufacturing

APSC Applied Science

APSS Applied Social Science

ART Art

ARTED Art Education

ARTH Art History

BIO Biology

BUACT Business Accounting

BUIFIN Business Finance

BUINB Business International Business

BULGL Business Legal

BUMGT Business Management

BUMIS Business Management Information Systems

BUMKG Business Marketing

BURTL Business Retail

BUSCM Supply Chain Management

CAHSS College of Arts, Humanities and Social Sciences

CEE Computer/Electrical Engineering

CEHHS College of Education, Health and Human Sciences

CHEM Chemistry

CHIN Chinese

CMG Cross-Media Graphics

CNS Cognitive Neuroscience

COGS Cognitive Science

COM College of Management

COUN Counseling

CS Computer Science

CSTEM College of Science, Technology, Engineering & Mathematics

CTE Career and Technical Education

DES Design

ECE Early Childhood Education

ECON Economics

EDPSY Educational Psychology

EDUC Education

ELEC Electricity/Electronics

ENGGR Engineering Graphics

ENGL English

ENSC Environmental Science

ESLI English as a Second Language Institute

ET Engineering Technology

FCSE Family and Consumer Sciences Education

FN Food and Nutrition

FREN French

GDD Game Design and Development

GEM Golf Enterprise Management

GEOG Geography

HDFS Human Development and Family Studies

HIST History

HLTED Health Education

HLTH Health

HT Hospitality and Tourism

HWF Health, Wellness and Fitness

ICT Information Communication Technologies

INMGT Industrial Management

ITC Instructional Technology Coordinator

ITM Information Technology Management

LIT Literature

LOG Logic

MATH Mathematics

MATHED Mathematics Education

MBE Marketing & Business Education

MECH Engineering Mechanics

MFGE Manufacturing Engineering

MFGT Manufacturing Technology

MFT Marriage and Family Therapy
MSCS Mathematics, Statistics and Computer Science
MSL Military Science and Leadership
MUSIC Music
NANO Nanoscience/Nanotechnology
PAX Peace Studies
PE Physical Education and Athletics
PHIL Philosophy
PHOTO Photography
PHYS Physics
PKG Packaging
PLE Plastics Engineering
PM Property Management
POLS Political Science
POWER Power
PSYC Psychology
RC Risk Control
RD Design, Research and Development
RDGED Reading Education
REHAB Vocational Rehabilitation
RUS Russian
SCIED Science Education
SCOUN School Counseling
SMGT Sustainable Management
SOC Sociology
SOCWK Social Work
SPAN Spanish
SPCOM Speech Communication
SPED Special Education
SPSY School Psychology
SRVM Service Management
STAT Statistics
STMED Science, Technology and Mathematics
 Education
SUST Sustainability
TECED Technology Education
TECH Technology
THEA Theatre
TRANS Transportation/Energy
TRDIS Transdisciplinary
TRHRD Training and Human Resource Development
WGS Women and Gender Studies

UW-Stout defines a credit hour as an amount of work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates: [1] At least one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately 15 weeks for one semester hour of credit, or the equivalent amount of work over a different amount of time; or [2] At least an equivalent amount of work as required in part one [1] of this definition for other academic activities as established by UW-Stout, including distance education, online, hybrid, or other indirect faculty instruction, laboratory work, internships, co-op experiences, studio work, and other academic work leading to the award of credit hours.

Course Planning Information

Information included with the course description helps you as you plan your course schedules. General Education, Racial and Ethnic Studies, Global Perspective, repeatability, and terms offered (if known) are indicated.

The terms indicated serve only as a general guide and do not guarantee that a course will be offered during a particular semester. Verify availability of a course in any given term by checking the online Open Courses listing or through Access Stout when planning your schedule.

Course Level

The three digits of the course codes refer to the course level. The 100 series is primarily for freshmen; 200 – sophomores; 300 – juniors; and 400 – seniors.

Course Title

Credits

AEC – Architecture, Engineering and Construction

AEC- 120 Construction Industry Orientation and Documents (3.00 cr.)

Repeatable: No

An introduction to the field of construction to broaden student understanding and develop appreciation of the entire scope of construction. Emphasis on fundamental understanding of construction documents including drawings and specifications. Relationship between drawings and specifications to other contractual documents will be explored.

AEC- 131 Architectural Graphics (3.00 cr.)

Repeatable: No

Architectural drafting with emphasis on drawing theory and delineation. Drawing media and equipment are utilized in solving problems relating to construction that are normally solved graphically. If taken for three credits, computer aided drafting will be included in the course work.

AEC- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

AEC- 171 Light Construction Methods And Materials (3.00 cr.)

Repeatable: No

The building process, terminology, codes, materials, safety requirements, tools, and equipment used in the construction industry with emphasis on residential and small commercial structures.

AEC- 172 Construction Technology (3.00 cr.)

Repeatable: No

Technology of constructing buildings, bridges and other structures, including: site preparation, foundation systems, superstructures, enclosures, utilities, finishing methods, and materials.

AEC- 190 Orientation To Construction Industry (1.00 cr.)

Repeatable: No

An introduction to the field of construction as presented by professionals in the construction industry to broaden student understanding and develop appreciation of the entire scope of construction.

AEC- 191 The Built Environment (3.00 cr.)

Contemporary Issues, Social Responsibility and Ethical Reasoning

Repeatable: No

Construction and its relationship to resources, materials, and the culture in which it takes place. Discussion of significant historical and modern structures. Emphasis on how, why, and by whom structures are built and what can be learned from them.

AEC- 198 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

AEC- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

AEC- 233 Architectural Design I (3.00 cr.)

Repeatable: No

Develop graphic simulation techniques and problem- solving abilities related to the architectural effectuation process. Gain an understanding of site planning, residential space requirements, building codes, structure, finishes, mechanical and electrical systems.

Prerequisites: take AEC-131

AEC- 237 Architectural Technology (3.00 cr.)

Repeatable: No

Space programming and planning, working drawings for commercial and industrial buildings. Building codes, energy requirements, construction contract documents, structural materials and systems, building materials and systems.

Prerequisites: take AEC-131

AEC- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

AEC- 270 Heavy Construction Methods And Equipment (3.00 cr.)

Repeatable: No

Introduction to commercial and industrial building systems: equipment, site preparations, footings, foundations, formwork, concrete, steel, and wood timber techniques.

Prerequisites: Take AEC-171

AEC- 273 Concrete And Masonry Technology (3.00 cr.)

Repeatable: No

Fundamental principles of cement and concrete (ingredients, mixing, placement, finishing, curing, properties, and applications); clay and concrete units (ingredients, properties, manufacture, placement, and application).

Prerequisites: AEC-171 with a grade of C or better

AEC- 298 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

AEC- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

AEC- 335 Architectural Design II (3.00 cr.)

Repeatable: No

Programming and analysis, design solution, presentation and design development drawings for commercial and/or public buildings; scale, site, codes, energy, acoustics, structure and their relation to form.

AEC- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

AEC- 352 Building Mechanical Systems (3.00 cr.)

Repeatable: No

Fundamental theory and application of heating, ventilation, air conditioning, plumbing, and fire suppression systems for buildings. Emphasis on system integration and sustainable topics as related to design, construction and management of mechanical construction scope of work.

Prerequisites: Take AEC-237

AEC- 353 Building Electrical and Control Systems (3.00 cr.)

Repeatable: No

Fundamental theory and application of the design, layout, and construction of electrical and building control systems. Principles of code, design, construction documents reading, means and methods applied to electrical systems, lighting, building controls, and sustainable topics as related to electrical scope of work.

Prerequisites: Take AEC-237

AEC- 357 Site Engineering (3.00 cr.)

Repeatable: No

Use of surveying instruments, techniques, computations and computer technology used to measure and describe land configurations; construction surveying including contours, grades, cut and fill, and drainage.

Prerequisites: Take AEC-131 & MATH-121 or higher

AEC- 370 Construction Estimating I (3.00 cr.)

Repeatable: No

Estimating and analyzing material, labor, equipment, methods of construction, overhead and profit, and submitting these factors in the form of a bid.

Prerequisites: Take AEC-237

AEC- 375 Construction Practicum (2.00 - 4.00 cr.)

Repeatable: No

Technical information, construction problems and actual development of light residential structure.

AEC- 395 Seminar: Lumber and Wood Products Industry (3.00 cr.)

Repeatable: No

Introduction to career opportunities in the lumber and wood products industry and to environmental aspects of forestry, timber

harvest, and product manufacture and use. Discussion of topics in forestry, business of lumber, responsible materials, green building and ecosystem markets.

AEC- 395 Seminar (1.00 - 2.00 cr.)

Repeatable: Yes

(Title will reflect specific construction content). Current and projected methods, concepts, technologies and innovations in construction.

AEC- 398 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

AEC- 399 Independent Study (1.00 cr.)

Repeatable: Yes

Department consent

AEC- 438 Contract Requirements And Specifications (3.00 cr.)

Repeatable: No

Principles of contract requirements and construction specification organization. Development of basic skills of project manual preparation. Demonstration of role of specifications within the construction process and relationship to other construction contract documents.

Prerequisites: Take ENGL-320 or ENGL-415

AEC- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

AEC- 455 Advanced Mechanical Construction Systems (3.00 cr.)

Repeatable: No

Principles of the design and installation of advanced mechanical systems with an emphasis on industrial construction applications. Related building codes, materials, instrumentation and control systems necessary for the installation and commissioning of advanced mechanical systems.

Prerequisite: take AEC-352

AEC- 456 Advanced Electrical Construction Systems (3.00 cr.)

Repeatable: No

Principles of the design and installation of advanced electrical systems in construction. Emphasis on industrial construction applications. Detailed topical coverage of related codes, materials, power generation, instrumentation and control systems necessary for the design, installation and operation of advanced electrical systems.

Prerequisite: take AEC-353

AEC- 458 Structural Systems--Wood And Steel (3.00 cr.)

Repeatable: No

Analysis, selection, and delineation of wood and steel structural components and systems in buildings.

Prerequisites: Take PHYS-321

AEC- 459 Structural Systems-Concrete And Masonry (3.00 cr.)

Repeatable: No

Analysis, selection, and delineation of concrete and masonry structural components and systems in buildings.

Prerequisites: Take AEC-458

AEC- 460 Sustainable Construction (3.00 cr.)

Repeatable: No

Survey of principles of sustainable construction, including building design and delivery methods. Ethics and stewardship as part of the constructor's role in the built environment. Examination of domestic and global Green building assessment systems. Emphasis is placed on preparing the student for the LEED building assessment system. Must be Junior level or higher

AEC- 461 Building Codes and Regulations (3.00 cr.)

Repeatable: No

Extensive examination of the International Building Code. Intent and purpose of codes and regulations are presented, discussed, and reasoned. Contemporary issues in the construction industry are evaluated by students. Particular emphasis is placed on preparing the student for the ICC Certified Inspector examination. Must be Junior level or higher

AEC- 470 Construction Estimating II (3.00 cr.)

Repeatable: No

Total concept of construction industry costs. Computer-based estimating systems for construction. Contracting, financing, takeoff, pricing, bid preparation, resource and cost studies, control of costs and database operations.

Prerequisites: Take AEC-370 with a grade of C or better

AEC- 471 Project Scheduling And Cost Control (3.00 cr.)

Repeatable: No

Total concept of construction industry: contracting, financing, bidding, planning, organizing, coordinating, and controlling functions and techniques.

Prerequisites: Take AEC-370 with a grade of C or better

AEC- 472 Management Of Construction (3.00 cr.)

Repeatable: No

Organizing, managing and operating the contracting firm.

Prerequisites: Take BUMGT-304

AEC- 473 Mechanical and Electrical Construction Management (3.00 cr.)

Repeatable: No

Principles of project management applied to mechanical and electrical construction projects. Organizing, managing and operating a mechanical or electrical specialty contracting firm.

Prerequisites: take AEC-455 and AEC-456

AEC- 495 Seminar (2.00 cr.)

Repeatable: No

(Title will reflect specific construction content). Current and projected methods, concepts, technologies and innovations in construction.

AEC- 498 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

AEC- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ANTH – Anthropology

ANTH- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ANTH- 220 Cultural Anthropology (3.00 cr.)

Racial & Ethnic Studies Category B, Global Perspective, Social and Behavioral Sciences - Anthropology

Repeatable: No

Introduction to anthropological concepts and methods; cultural diversity worldwide and in the United States; aspects of culture and how they change over time; introduction to the application of anthropology to contemporary social issues; anthropological perspectives on race and ethnicity.

ANTH- 230 Anthropology of the Contemporary United States (3.00 cr.)

Racial & Ethnic Studies Category A, Social Responsibility and Ethical Reasoning

Repeatable: No

Use of theoretical and conceptual principles and perspectives of cultural anthropology to study communities and cultures in the U.S. Examination of race, class, gender, and sexual inequalities; current Native American issues; kinship; religion; militarism; cultures of science and technology.

ANTH- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally, entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ANTH- 250 The Human Past (3.00 cr.)

Social and Behavioral Sciences - Anthropology

Repeatable: No

Biological anthropology: humans as primates, origins of humans, stages of human evolution, and relationship of biology and culture.

ANTH- 290 Global Political Ecology (3.00 cr.)

Contemporary Issues, Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Social, political, and economic origins of contemporary environmental problems from sociological, anthropological and geographic perspectives; social construction of nature and knowledge; environmentalism, environmental racism and environmental justice in cross-cultural perspective; ethical implications of contemporary environmental problems regarding perspectives and distributions of justice.

ANTH- 293 Environmental Justice (3.00 cr.)

Racial & Ethnic Studies Category A, Social Responsibility and Ethical Reasoning

Repeatable: No

Environmental racism; socio-economic inequality and exposure to environmental hazards; race, class, and environmental suffering; grassroots activism and opposition to environmental inequality and racism, particularly among U.S. minority groups; incorporation of environmental justice principles into public policy and corporate decision-making.

ANTH- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ANTH- 300 Native Americans (3.00 cr.)

Racial & Ethnic Studies Category A, Social and Behavioral Sciences - Anthropology

Repeatable: No

Survey of Native American cultures; major social, economic, religious, and political forms of organization; contemporary Native American lives and issues in both urban and reservation contexts.

ANTH- 310 Latinos in the United States (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category A

Repeatable: No

People of Latin American origin and Latina/o identities in the United States; cultural construction of identity, especially race, ethnicity, nation, gender, and other differences; contemporary debates related to Latinos, immigration policy, and multiculturalism; conflicts over the meaning of citizenship and national belonging.

ANTH- 320 Social Movements in Global Perspective (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category B, Global Perspective

Repeatable: No

Social movements, collective action and activism; indigenous rights, labor organizing, civil rights, gender- and sexuality-based struggles, racial/ethnic identity formation and the claiming of rights, and anti-globalization activism in the U.S. and internationally; contested meanings of justice, citizenship, and democracy in a context of global capitalism.

ANTH- 330 Social Theory (3.00 cr.)

Repeatable: No

Learning and applying advanced sociological and anthropological theories to social issues. Understanding various tools of explanation in the social sciences, as well as their origins, assumptions, and specific ways-of-knowing. Building a theoretical toolkit with the ability to compare, evaluate and synthesize theories for particular applications.

ANTH- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ANTH- 356 Gender in Cross Cultural Perspective (3.00 cr.)

Racial & Ethnic Studies Category B, Global Perspective, Social and Behavioral Sciences - Anthropology, Social Responsibility and Ethical Reasoning

Repeatable: No

Gender roles in cross-cultural perspective. Anthropological theories of gender and inequality; social responsibility balancing cultural relativism and equity. Variation in domestic, social, economic, political, and religious roles; historical development of and contemporary changes in gender roles; global influences and processes of change and improvement in the lives of modern women.

ANTH- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ANTH- 400 Applied Anthropology (3.00 cr.)

Repeatable: No

Application of anthropology to address social problems through research, advocacy, and policy development. Cross-cultural case studies and community outreach through service learning or career-oriented research project that incorporates ethnographic fieldwork strategies, critical reflection on human rights, social justice, and research ethics.

Prerequisite: take ANTH-220

ANTH- 420 The Anthropological Study Of Family Systems (3.00 cr.)

Repeatable: No

Anthropological, cross-cultural view of family systems, with attention to their organization, functions, dynamics and articulation with other institutions.

ANTH- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ANTH- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

APRL – Apparel Design/Manufacturing

APRL- 134 Global Fashion Industry (3.00 cr.)

Global Perspective

Repeatable: No

Analysis of the global fashion industry including design, development, merchandising, and manufacturing, with a specific emphasis on brand and organizational development.

APRL- 145 Interior Decorating/Design Textiles (3.00 cr.)

Repeatable: No

Fibers and fabrics used in design/decorating planning of residential and commercial settings.

APRL- 166 Apparel Construction I (3.00 cr.)

Repeatable: No

Study and application of woven apparel construction techniques, fabric selection, and fit.

APRL- 167 Textiles I: Theory, Fibers and Structures (3.00 cr.)

Repeatable: No

Study of fibers, yarns, textiles, and textile manufacturing processes, and how target market needs are addressed through textile selection.

APRL- 180 Pattern Development (3.00 cr.)

Repeatable: No

Introduction to flat pattern development for woven garments, with a focus on pattern alterations and fit process for global production.

APRL- 211 History Of Fashion-19th Century To Present (3.00 cr.)

Repeatable: No

A study of the evolution of fashion from the 19th century to the present concentrating on the impact of the fashion designer and changing fashion trends.

APRL- 225 Target Market Research and Line Development (3.00 cr.)

Repeatable: No

Apparel collection development by researching target markets and trend; hand and computer drawing techniques are utilized to communicate collection development.

APRL- 250 Textiles II: Evaluation (3.00 cr.)

Repeatable: No

Evaluation of materials and products using industry testing equipment, procedures, and standards.

Prerequisite: Take APRL-167

APRL- 272 Quality Analysis Of Sewn Products (3.00 cr.)

Repeatable: No

Analysis of sourcing and materials for quality product performance and specification development.

Prerequisite: Take APRL-167

APRL- 274 Fashion Industry (3.00 cr.)

Global Perspective

Repeatable: No

Processes/functional areas in a sewn product enterprise.

APRL- 286 Apparel Construction II: Cut and Sewn Knits (3.00 cr.)

Repeatable: No

Study and application of construction methods specific to stretch fabric sewn products.

Prerequisite: Take APRL-180

APRL- 290 Specifications and Fit Development (3.00 cr.)

Repeatable: No

Garment sizing, fit, graded specifications, and pre-production processes of mass produced apparel.

Prerequisites: Take APRL-180 and APRL-272

APRL- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

APRL- 355 Special Topics In Apparel Design/ Manufacturing (1.00 - 3.00 cr.)

Repeatable: Yes

Special topics in clothing and textiles. Repeatable for different topics.

APRL- 373 Advanced Pattern Development (3.00 cr.)

Repeatable: No

Advanced pattern development by flat pattern making and draping methods, with an emphasis on creative pattern modifications and fit evaluation for global production.

Prerequisite: Take APRL-180

APRL- 390 CAD For Apparel Images (3.00 cr.)

Repeatable: No

Using CAD programs, students create and communicate apparel collections for various target markets based on market research.

Prerequisite: Take APRL-225

APRL- 390 Practicum In Textile Design (3.00 cr.)

Repeatable: No

Use of textile design techniques as means of artistic expression: stitchery, weaving, knotting, applique and hooking; emphasis on good design and creativity.

Prerequisite: Take ART-101 with a grade of C or better

APRL- 393 Garment Engineering/Production (3.00 cr.)

Repeatable: No

Knowledge of the global fashion industry including development, merchandising, and engineering of soft goods production applied in a team-based laboratory simulation.

Prerequisites: take APRL-134, APRL-250, APRL-286, and APRL-290

APRL- 394 Knit Design And Technology (3.00 cr.)

Repeatable: No

Stitch formation and patterning of warp and filling knits. Influences on aesthetics and performance of knit fabrics. Design and production of knitted fabric and garments on a flatbed knitting machine, including use of CAD techniques.

Prerequisites: Take APRL-140 & APRL-285

APRL- 398 Field Experience (2.00 - 3.00 cr.)

Repeatable: Yes

A practical work experience within the apparel industry, supervised by a faculty member, requiring a minimum of 180 hours of unpaid work.

Department consent

APRL- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

APRL- 405 International Study Tour To The Fashion Industry (1.00 - 6.00 cr.)

Repeatable: Yes

Tour of international centers of clothing, textiles, and related arts. Study of the cultural patterns. Program includes lectures by consultants and seminars on the various phases of the fashion and fabric industries.

Department consent

APRL- 419 National Study Tour To Fashion Industry (1.00 cr.)

Repeatable: Yes

Five-day visit to New York or alternate city: study hours, discussions and lectures by leaders in American fashion market.

Department consent

Must be Junior level or higher

APRL- 449 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

A practical work experience within the apparel industry, supervised by a faculty member, requiring a minimum of 320 hours of paid work over a minimum of eight weeks.

Department consent

Must have a cumulative GPA of 2.75 or higher and must be at least a Junior.

APRL- 464 Functional Design and Development (3.00 cr.)

Repeatable: No

Work teams apply physical science theory and creative problem solving methods to innovate functional clothing for specific needs, occupations, and activities.

Prerequisites: take APRL-250, APRL-286, APRL-290, APRL-373, and APRL-390

APRL- 470 Portfolio Development For Apparel Design And Development (3.00 cr.)

Repeatable: No

A capstone course: resume and job search development; organization and updating projects from previous courses; creation of new portfolio projects that display a high level of apparel design and development skills and competencies.

Prerequisites: Take APRL-381, APRL-382, APRL-385, and APRL-394

APRL- 485 Apparel Design Studio (3.00 cr.)

Repeatable: No

Creation, development, and formal presentation of original designs using flat pattern and/or draping techniques. Preparation of professional portfolio to include CAD and other illustrative materials representative of individual expertise.

APRL- 498 Field Experience (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in approved position to better understand challenges and potentials of various careers in merchandising and clothing and textile industries.

Department consent

APRL- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

APSC – Applied Science

APSC- 101 Applied Science Profession I (1.00 cr.)

Repeatable: No

Exploration of career areas of interest; examine appropriate interpretations of scientific measurements and experimental design.

APSC- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain practical experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

APSC- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain practical experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

APSC- 311 Issues For Science Professionals (3.00 cr.)

Repeatable: No

Proprietorial, ethical, and legal issues affecting the careers of science professionals.

Must be Junior level or higher & must have taken PHIL-235

APSC- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain practical experience. Normally entails recurring, supervised work periods, each one

building and expanding on the previous.
Department consent

APSC- 398 Field Experience In Applied Science (1.00 - 6.00 cr.)

Repeatable: Yes

Field experience in Applied Science in an approved position.

Guidelines for credit to follow those developed by the University for coop experiences. Students are responsible for an oral presentation and a written report.

Department consent

APSC- 401 Applied Science Profession II (1.00 cr.)

Repeatable: No

Preparation for the science profession. Assess knowledge base, identify areas of strengths and weaknesses, define plan for further development. Build a professional portfolio and resume, and review interviewing skills. Explore methods of strategic planning and analysis for science professionals.

Must be Senior level or higher

APSC- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

APSC- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

APSS – Applied Social Science

APSS- 100 Introduction to Applied Social Science (1.00 cr.)

Repeatable: No

Introduction to social science ideas, ethics and practices. Acquaints students with the Applied Social Science program structure and choices, as well as potential job opportunities in the field.

APSS- 200 Applied Social Analysis I (3.00 cr.)

Repeatable: No

First of three social science research methods courses for the Applied Social Science major; students will learn general research design, literature reviews, multiple qualitative research methods, theory integration into research, and research dissemination strategies.

APSS- 300 Applied Social Analysis II (3.00 cr.)

Repeatable: No

Second of three social science research methods courses for the Applied Social Science major; advanced methodological issues of quantitative inquiry; practical issues of application and evaluation of research tools.

APSS- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

APSS- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: No

Department consent

APSS- 400 Applied Social Analysis III (3.00 cr.)

Repeatable: No

Capstone experience for the undergraduate major in Applied Social Science; develop and conduct an applied research project using theory and evidence to analyze the phenomenon chosen, and to communicate the results.

Prerequisite: take APSS-300

APSS- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

APSS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ART – Art

ART- 100 Drawing I (3.00 cr.)

Creative Arts

Repeatable: No

Study and application of the principles and mechanics of descriptive freehand drawing using black and white media.

ART- 101 Two-Dimensional Design Foundations (3.00 cr.)

Creative Arts

Repeatable: No

Principles and elements of two-dimensional design and their application to the foundations of visual expression.

ART- 102 Introduction To Art And Design (1.00 cr.)

Repeatable: No

Introduction to various disciplines and activities in art and design. Not appropriate for General Education requirement.

ART- 103 Three-Dimensional Design Foundations (3.00 cr.)

Repeatable: No

The study of the principles and elements of three-dimensional design and their application to the foundations of visual expression.

Prerequisite: Take ART-101 with a grade of C or better

ART- 114 Color Studio (3.00 cr.)

Repeatable: No

Students apply color knowledge to art and design exercises. Content covered includes the physical properties of color, the schools of color theory and influential color theorists, and color vocabulary.

ART- 145 The Practice Of Art (2.00 - 3.00 cr.)

Repeatable: No

Introduction to current professional practices and historical roles of artists in culture.

Students must be Studio Art or Art Education majors only

ART- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ART- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ART- 200 Drawing II (1.00 - 3.00 cr.)

Repeatable: Yes

Study and application of the principles and mechanics of interpretive freehand drawing focusing on invention, and creative investigation using a variety of black and white, color, and mixed media.

Prerequisite: take ART-100 with a grade of C or better

ART- 209 Painting I (3.00 cr.)

Repeatable: No

Introduction and investigation of acrylic and/or oil painting.

Prerequisites: take ART-200 with a grade of C or better

ART- 211 Contemporary Sculptural Practices I (3.00 cr.)

Repeatable: No

Introduction to sculptural concepts.

Prerequisite: take ART-103 with a grade of "C" or better

ART- 213 Ceramics I (3.00 cr.)***Creative Arts***

Repeatable: No

Study and application of wheel-throwing, hand-building, glazing and firing techniques for ceramics, as a means of visual expression.

ART- 215 Art Metals I (3.00 cr.)***Creative Arts***

Repeatable: No

Exploration and development of jewelry and other three-dimensional objects made of metal and related materials. An introduction to concept, design development and technical approaches.

ART- 217 Printmaking I (3.00 cr.)

Repeatable: No

Introduction to the concepts and techniques of printmaking.

Prerequisites: take ART-101 and ART-200, each with a grade of C or better

ART- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ART- 256 Art Workshop (1.00 - 3.00 cr.)

Repeatable: No

Selected art concepts, processes and media will vary to serve special student populations. Credit determined by individual contract.

ART- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ART- 300 Drawing Iii (3.00 cr.)

Repeatable: Yes

Advanced drawing methodologies with emphasis on media exploration, furthering drawing strategies, exposure to historical and current drawing concerns and independent research.

Prerequisites: take ART-200 with a grade of C or better

ART- 301 Life Drawing I (3.00 cr.)

Repeatable: No

Drawing and analyzing the human figure and other natural forms.

Translating three-dimensional form to the two-dimensional picture plane.

Prerequisites: take ART-200 with a grade of C or better

ART- 307 Aesthetics in the Studio (3.00 cr.)

Repeatable: No

Introduction to the problems of aesthetics, such as interpretation, creation, and experience of art as it relates to studio practices.

Prerequisites: Take ARTH-223 and ARTH-224; and take ARTH-336 or ARTH-337 (may be taken concurrently). Also, one 300-level or higher studio Art must be taken concurrently.

ART- 311 Contemporary Sculptural Practices II (3.00 cr.)

Repeatable: No

Continued investigation into contemporary sculptural practices with an emphasis upon expanded research, development of concepts, and exploration of materials.

Prerequisite: take ART-211 with a grade of "C" or better

ART- 315 Art Metals II (3.00 cr.)

Repeatable: No

Exploration of intermediate jewelry forms and three-dimensional objects made of metal and related materials. Expanded approaches

to conceptual development, design and technical applications. A special course fee applies.

Prerequisite: take ART-215 with a grade of C or better

ART- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ART- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ART- 401 Life Drawing II (3.00 cr.)

Repeatable: No

Continued drawing and analysis of the structure of the human figure.

Prerequisite: take ART-301 with a grade of C or better

ART- 403 Life Drawing III (1.00 - 3.00 cr.)

Repeatable: Yes

Self-directed study of Life Drawing; continued development of individual research, drawing skills, and studio discipline.

Prerequisite: take ART-401 with grade of C or better

ART- 409 Painting II (1.00 - 3.00 cr.)

Repeatable: Yes

Continued investigation of painting issues with a broader range of technical concerns, historical and contemporary approaches through expanded research requirements.

Prerequisite: take ART-209 with a grade of C or better

ART- 410 Painting III (3.00 cr.)

Repeatable: Yes

Self-directed study of painting. Continued development of individual research, painting skills, and studio discipline.

Prerequisite: take ART-409 with a grade of C or better

ART- 411 Contemporary Sculptural Practices III (1.00 - 3.00 cr.)

Repeatable: Yes

Advanced problems in sculpture, through the exploration and utilization of media for creative and expressive ends. Repeatable; topics and projects change.

Prerequisite: take ART-311 with a grade of C or better

ART- 413 Ceramics II (1.00 - 3.00 cr.)

Repeatable: Yes

Use of clay, glazes and kiln for design and production of high-fired ceramics. Initial enrollment must be for 3 credits.

Prerequisite: take ART-213 with a grade of C or better

ART- 414 Color Seminar (4.00 cr.)

Repeatable: No

A case-study course exploring methodologies for use of color.

Content includes gender-specific, historic, psychological, social, and symbolic use of color; color sensibilities in other cultures; and roots of color beliefs.

Prerequisites: take PHYS-150, PSYC-432, GCM-367, and ART-114 with a grade of C or better

ART- 415 Art Metal III (1.00 - 3.00 cr.)

Repeatable: Yes

Advanced studio experience in individualized jewelry forms and three-dimensional objects made of metal and related materials. A continuation of technical skills is coupled with emphasis on conceptual development and critical thinking. A special course fee applies.

Prerequisite: Take ART-315 with a grade of C or better

ART- 417 Printmaking II (1.00 - 3.00 cr.)

Repeatable: Yes

Advanced work in the processes of relief, silkscreen, etching or lithographic printmaking. Initial enrollment must be for 3 credits.

Prerequisite: take ART-217 with a grade of C or better

ART- 445 Senior Seminar (1.00 cr.)

Repeatable: No

Professional practice including portfolio and senior exhibition; current ideas and career opportunities within the art profession.

Prerequisites: take ART-145 and ART-307 with a grade of C or better; Prerequisite or concurrent enrollment in ART-307. Must be Senior level, and must be Studio Art or Art Education major.

ART- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ART- 456 Advanced Art Workshop (1.00 - 3.00 cr.)

Repeatable: Yes

Selected art concepts, processes and media will vary to serve special student populations. For students familiar with workshop approach or advanced in art program. Credit determined by individual contract.

ART- 490 BFA Thesis Exhibition (1.00 cr.)

Repeatable: No

Creation and dissemination of a body of artwork produced during the student's senior year.

Instructor's consent

Must be Senior level or higher

ART - 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ARTED – Art Education

ARTED- 108 Introduction To Art Education (2.00 cr.)

Repeatable: No

Fundamental, historical and philosophic components of Art Education with an emphasis on discipline-based Art Education.

ARTED- 208 Contemporary Theory and Curricular Practices in Art Education (3.00 cr.)

Repeatable: No

Seminar and practicum course designed to combine theory and practice in K-12 art instruction. The seminar is devoted directly toward contemporary theory surrounding K-12 art education. The practicum involves 30 hours of partnered art classroom participation, including the planning, instruction, and assessment of an art lesson.

Department consent

Prerequisites: take ARTED-108 and Benchmark I

ARTED- 308 K-12 Art Education Theory, Methods, And Practice (4.00 cr.)

Repeatable: No

Theory, methods, and curriculum development in art education including K-12 art teaching practicum in selected elementary and secondary art classrooms.

Prerequisites: take ARTED-208 and ARTH-223 and Benchmark I completion

ARTED- 408 Student Teaching In Art Education - Elementary (8.00 cr.)

Repeatable: No

Directed teaching in elementary art; required student teaching seminars, on-line course participation, and completion of portfolio.

Department consent

Prerequisite: Benchmark I completion

ARTED- 409 Student Teaching In Art Education - Secondary (8.00 cr.)

Repeatable: No

Directed teaching in secondary art; required student teaching seminars, on-line course participation, and completion of portfolio.

Department consent

ARTED- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ARTED- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ARTH – Art History

ARTH- 222 Introduction To Art (3.00 cr.)

Art History

Repeatable: No

Art appreciation and historical survey for the non-art major.

ARTH- 223 Survey Of Art--Ancient Through Medieval (3.00 cr.)

Art History

Repeatable: No

The painting, sculpture, architecture and minor arts in the ancient western world.

ARTH- 224 Survey Of Art-Renaissance Through 20th Century (3.00 cr.)

Art History

Repeatable: No

Sculpture, painting, architecture and minor arts of western world from 14th century to present.

ARTH- 225 Introduction To Non-Western Art (3.00 cr.)

Art History, Global Perspective

Repeatable: No

Cross cultural examination of the history of Non-Western art from a global perspective. Exploration of the arts of Asia, Africa, the Americas, Oceania, and the Islamic world. Exposure to diverse visual elements and humanistic concerns. Themes include: diversity, identity, religion, politics, representation of self and "the other", and Westernization.

ARTH- 250 British Art, Architecture, and Design (3.00 cr.)

Art History, Global Perspective

Repeatable: No

Survey of the art, architecture, and design of Great Britain, with travel to the British Isles.

ARTH- 256 Special topics in Art History: Art in Italy (3.00 cr.)

Humanities and the Arts - Art History/Music Apprec

Repeatable: No

Survey of the art and architecture of Italy, from Antiquity through the 17th Century, with travel to Italy.

ARTH- 319 History Of Design (3.00 cr.)

Repeatable: No

Survey of the history of modern design since its origins in the late Renaissance.

Prerequisites: take ARTH-224 with a grade of C or better and ENGL-101/ENGL-111

ARTH- 326 Greek And Roman Art (3.00 cr.)

Repeatable: No

The arts of ancient Greece and Rome.

ARTH- 327 Medieval Art (3.00 cr.)

Repeatable: No

The arts of Europe and Byzantium from late Roman Empire to end of Middle Ages.

ARTH- 328 Italian Renaissance Art (3.00 cr.)

Repeatable: No

A chronological, geographic, and thematic survey of art and architecture in Italy from the fourteenth through the sixteenth centuries.

ARTH- 329 Northern Renaissance Art (3.00 cr.)

Repeatable: No

A chronological, geographic, and thematic survey of art in Northern Europe during the late fourteenth, fifteenth and sixteenth centuries.

ARTH- 330 Baroque Art (3.00 cr.)

Repeatable: No

A chronological, geographic, and thematic survey of art and architecture in Europe and the colonial New World in the seventeenth and early eighteenth centuries.

ARTH- 331 Art and Controversy (3.00 cr.)

Art History, Social Responsibility and Ethical Reasoning

Repeatable: No

Exploration of controversial or provocative works of art that push the boundaries of artistic expression. Consideration of social and historical contexts of provocative imagery. Understanding the delicate balance between differing individual, social, and cultural mores and an artist's right to freedom of expression.

ARTH- 332 Gender and Art (3.00 cr.)

Repeatable: No

Exploration of social and cultural constructions of identity and sexuality from Prehistory to the Modern era. Analysis of the ways in which gender identities can be shaped by politics, religion, and culture, and how an artist's gender and/or sexual preferences affect visual imagery, from subject choices to market values.

ARTH- 333 History of Interiors and Furnishings (3.00 cr.)

Global Perspective

Repeatable: No

A survey of the history of interior design, furniture, and household objects since ancient Egypt.

ARTH- 335 19Th Century Art In Europe (3.00 cr.)

Repeatable: No

History of European art from about 1800 to 1900.

ARTH- 336 Modern Art (3.00 cr.)

Repeatable: No

The main currents and developments in art from Monet and Cezanne to 1950.

ARTH- 337 Art Since 1950 (3.00 cr.)

Repeatable: No

Developments in painting and sculpture in Europe and America since 1950.

Prerequisite: take ARTH-224 with a grade of C or better

ARTH- 339 Japanese Art And Culture (3.00 cr.)

Global Perspective

Repeatable: No

Thematic survey of the art and culture of Japan from pre-history to the present day. Recognition of major styles, appreciation of Eastern cultural ideals, familiarity with influences and borrowings from the West. Class discussions include religion (Shinto, Buddhism), art, culture (tea ceremonies, Kabuki Theater) and literature.

ARTH- 340 History of Interactive Media (3.00 cr.)

Repeatable: No

Survey of historical developments leading to, and in the design of, video games, the Internet, and related media.

Must be in a BFA major, Art Ed or GDD major

ARTH- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ARTH- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BIO – Biology

BIO- 101 Introductory Biology (4.00 cr.)

Natural Science with Lab

Repeatable: No

Introduction to the science of biology including life processes, cell biology, genetics, molecular biology, evolution, ecology, plant and animal diversity. Living systems are viewed from the sub-cellular to the community level, emphasizing the diversity, functioning, and interaction of whole organisms.

BIO- 111 Science, the Environment and Sustainability (4.00 cr.)

Natural Science with Lab, Contemporary Issues, Global Perspective

Repeatable: No

Relationship of humans to the natural environment with a focus on sustainability. Ecological principles in relation to global contemporary problems, such as resource utilization, species extinction, human population dynamics, and climate change, with an interdisciplinary approach to problem solving. A special course fee applies.

BIO- 125 Biology Of Aging (3.00 cr.)

Natural Science

Repeatable: No

Understanding the aging process. Physiological, demographic, immunological and overall health aspects of aging.

BIO- 128 Community Health (2.00 cr.)

Health and Physical Education - Health

Repeatable: No

Disease prevention through education, sanitation, isolation and

immunization; public health programs and operation of federal and state laws.

BIO- 130 Human Sexual Biology (3.00 cr.)

Natural Science, Contemporary Issues

Repeatable: No

Interdisciplinary investigation into human reproductive physiology, from development through reproduction and aging, including contraception and sexually transmitted infections, within a framework of historical context and societal lens.

BIO- 132 Human Biology (4.00 cr.)

Natural Science with Lab

Repeatable: No

Basic concepts of physiological processes and anatomy of all organ systems of humans, based on dissection of a cat; embryological development.

BIO- 135 Organismal Biology (4.00 cr.)

Repeatable: No

Introduction to the biological sciences, including evolution, an overview of life's diversity, plant biology, animal biology, and ecology. Emphasis on scientific thought processes, laboratory skills, and communication skills.

Must be APSCI, ENVSCI, SCIED, or PRE-HEALTH major

BIO- 136 College Molecular Cell Biology I (5.00 cr.)

Repeatable: No

Introduction to the biological sciences, including cell biology, physiology, and molecular biology. Emphasis on scientific thought processes, laboratory skills, and communication skills. For Applied Science and Science Education majors, and Biology minors.

Must be APSCI, ENVSCI, SCIED, or PRE-HEALTH major

BIO- 141 Plants and People (4.00 cr.)

Natural Science with Lab, Contemporary Issues, Global Perspective

Repeatable: No

Interdisciplinary investigation into the global economic and cultural importance of plants, how aspects of plant biology have played historical roles in shaping societies around the world, and the roles of plants in solving future societal problems. A special course fee applies.

BIO- 150 Environmental Science (2.00 cr.)

Natural Science with Lab, Global Perspective

Repeatable: No

The relationship of humans to the natural environment. Study of ecological principles in relation to contemporary problems such as resource utilization, human population dynamics, waste and pollution control.

BIO- 196 Biology of Women (3.00 cr.)

Repeatable: No

Genetics of sex determination, development, anatomy, reproductive biology, intelligence, aging, disease, behavior and evolution as they relate to the biology of women. Offered in Scotland.

BIO- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BIO- 210 Concepts And Issues In Biotechnology (2.00 cr.)

Natural Science, Global Perspective

Repeatable: No

Concepts and issues in the field of Biotechnology. Overview of stem cell research, cloning, tissue engineering, artificial organs, genetically modified foods, and others as appropriate.

BIO- 220 Physiology Of Disabilities (3.00 cr.)

Repeatable: No

Causes, consequences, prognoses and treatments of diseases and injuries common in today's society. Includes genetic disorders, birth defects, cancers, degenerative disorders, spinal cord injuries, cardiovascular abnormalities and immune disorders.

Prerequisites: BIO-132 or BIO-234

BIO- 234 Physiology And Anatomy (4.00 cr.)

Natural Science with Lab

Repeatable: No

The structure and function of the human organism at the cellular, organ, and organism levels with emphasis on the physiological control systems and the concept of homeostasis as the unifying concept in physiology.

Prerequisites: take BIO-101 or CHEM-125 or CHEM-135

BIO- 235 Molecular Cell Biology II (4.00 cr.)

Repeatable: No

Consideration of eukaryotic cell structure, function and processes.

Prerequisites: take BIO-135 and CHEM-136

BIO- 242 Botany (4.00 cr.)

Natural Science with Lab

Repeatable: No

Introduction to structure and function of plants, survey of plant kingdom, and structure and life history of representative forms of plant life.

BIO- 252 Zoology (4.00 cr.)

Natural Science with Lab

Repeatable: No

Investigation of vertebrate and invertebrate animal life. Diversity, physiology and adaptation of the animal species.

BIO- 260 Ichthyology - Wisconsin Fishes (4.00 cr.)

Natural Science with Lab

Repeatable: No

Introduction to the study of fishes, including morphology, taxonomy, classification, evolution, behavior, and general ecology of fishes.

Special emphases on field identification of Wisconsin fishes, management of Wisconsin fish populations, and global conservation of fishes.

BIO- 270 Natural History of the Neotropics (4.00 cr.)

Natural Science with Lab, Global Perspective

Repeatable: No

Natural history of neotropical marine and terrestrial systems, including coral reefs and rainforests. Focus on patterns and processes underlying biodiversity of the tropics, including ecological principles, specific adaptations, and taxonomy of tropical biota. Introduction to human cultures of the neotropics and their historical and contemporary impacts on biodiversity.

BIO- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BIO- 306 General Microbiology (4.00 cr.)

Repeatable: No

Introduction to microbial life forms including Archaea, Bacteria, and Eukarya. Survey of microbial cell biology, physiology, molecular biology, ecology, and pathogenesis. Bacteriological and molecular methods used to identify microorganisms in natural and artificial environments.

Prerequisite: take BIO-101 or any CHEM

BIO- 322 Plant Pathology (3.00 cr.)

Repeatable: No

Principles and concepts of plant pathology, including the impact of plant disease to crop production, environment and society. BIO-242

BIO- 324 Vascular Plant Taxonomy (4.00 cr.)

Repeatable: No

Plant classification, identification, and evolution. Focus on flowering plant families of the Upper Midwest. Field trips and plant collection required.

BIO-242

BIO- 332 Genetics (3.00 cr.)

Natural Science with Lab

Repeatable: No

Fundamental principles of genetics, from Mendel to the present; applications to plants, animals and humans. Laboratory reinforces principles studied in lecture and includes performance of genetic crosses, the cell, mitosis/meiosis, use of mathematical tools to analyze data, gene mapping, karyotyping, pedigree analysis, and the concepts of transformation/transduction.

Prerequisites: take BIO-101

BIO- 336 Infection and Immunity (4.00 cr.)

Repeatable: No

Examination of the human immune system and infectious diseases including past epidemics as well as emerging infections in society.

Prerequisites: Take either BIO-136 or BIO-306 or CHEM-311

BIO- 343 Plant Physiology (4.00 cr.)

Repeatable: No

The fundamental physiological processes of plants including

investigation of the mechanical, physical and biochemical functions of plants.

Prerequisites: BIO-242 and 100-level CHEM or higher

BIO- 350 Ecology (3.00 cr.)

Repeatable: No

Interrelationships of organisms with their abiotic and biotic environments.

Prerequisites: take BIO-111 or BIO-135 or BIO-141

BIO- 351 Ecology Laboratory (2.00 cr.)

Repeatable: No

Application of ecological methods to answering ecological questions, including research study development, data analysis, and interpretation.

Prerequisite: take BIO-350, or concurrent enrollment

BIO- 352 Plant Ecology (3.00 cr.)

Repeatable: No

Investigation into factors affecting the distribution and abundance of plants. Laboratory and discussion emphasis on using field sampling, GIS, current research, and restoration techniques to identify and solve plant resource management problems. Weekend field trip(s) required.

Prerequisite: take BIO-242

BIO- 355 Entomology (4.00 cr.)

Repeatable: No

Biology of insects and related arthropods, with emphasis on evolution, ecology, behavior, biodiversity, morphology, and systematics. Laboratory emphasizes identification and collection.

Prerequisites: Take BIO-111 or BIO-135 or BIO-136 or BIO-141

BIO- 358 Introductory Pharmacology (2.00 cr.)

Repeatable: No

Discussion of the sites and mechanisms of drug action, mechanisms of drug distribution, biotransformation and elimination. Analgesics and psychoactive drugs, drugs used clinically to impact cardiovascular care and to manipulate the reproductive system.

Prerequisites: take BIO-132, BIO-234 or CHEM-135

BIO- 360 Introduction To Neuroscience (3.00 cr.)

Repeatable: No

Investigation of the human nervous system at the molecular, cellular and system level. Organization and function of neuronal cells, sensory receptors, sensory and motor pathways and integration centers. Introduction to electro- physiology, biochemistry of neurotransmitters and receptors, neuropharmacology, development of the nervous system, and consequences of neuronal disease and trauma.

Prerequisites: BIO-132 or BIO-234

BIO- 361 Psychobiology (2.00 cr.)

Repeatable: No

Biological basis of human and animal behavior: evolution of physiological and behavioral adaptations of organisms to their environment.

BIO- 362 Advanced Physiology (3.00 cr.)

Repeatable: No

Human physiology with emphasis on integration of the nervous, muscular, cardiovascular, immune, renal, respiratory, digestive and endocrine systems. Cellular and molecular processes are studied. Computer simulations and experiments in frog physiology will be utilized.

Prerequisites: take BIO-234

BIO- 370 Biotechnology (3.00 cr.)

Repeatable: No

Theoretical and laboratory experience in recombinant DNA techniques and their applications in the biotechnology industry.

Prerequisites: take BIO-235 and CHEM-201

BIO- 372 Plant Biotechnology (3.00 cr.)

Repeatable: No

Presents an overview of the techniques and underlying theory of plant tissue culture and genetic engineering, research and commercial applications, and issues/challenges in the area of plant biotechnology.

Prerequisites: take BIO-136, BIO-235 and BIO-242

BIO- 386 Introduction to Biostatistical Analysis (3.00 cr.)

Repeatable: No

Overview of quantitative analytical techniques applied to biological questions using the scientific method. Statistical procedures will encompass descriptive and inferential techniques including graphical display of data, quantitative description, hypothesis testing, and study design as applied to biological and health sciences.

Prerequisite: Take BIO-135 or 136, and MATH-121 or equivalent

BIO- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BIO- 400 Special Topics In Biotechnology (1.00 - 2.00 cr.)

Repeatable: Yes

Topics of current or historical importance in the understanding of biotechnology. Designated topics announced prior to start of semester. May be repeated for elective credit.

Must be Junior level or higher

BIO- 406 Food Microbiology (3.00 cr.)

Repeatable: No

Methods of food preservation, their effectiveness and related food spoilage by microorganisms. Quality control techniques used to determine presence of specific groups of economically important microorganisms.

Prerequisite: take BIO-306

BIO- 425 Proteomics (3.00 cr.)

Repeatable: No

State-of-the-art training in proteomics. Solutions to biological research questions and operation of proteomics equipment such as chromatography devices and mass spectrometers.

Instructor's consent

Prerequisite: take BIO-235. Must be concurrently enrolled in CHEM-311.

BIO- 434 Cadaver Dissection (3.00 cr.)

Repeatable: No

Detailed regional exploration, through cadaver dissection, of human anatomical structures with emphasis on appendages, thorax and abdomen. Identification of muscles, blood vessels, nerves and organs.

Prerequisites: take BIO-234

BIO- 444 Problem In Environmental Sustainability (3.00 cr.)

Repeatable: No

Integrate knowledge, theory, and practice from the humanities, social and natural sciences to explore current environmental issues and challenges.

Prerequisites: Junior level or higher and BIO-350

BIO- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BIO- 450 Aquatic Ecology and Management (4.00 cr.)

Repeatable: No

Principles of lake ecology, water resources degradation, management, and restoration. Diagnosis of water quality problems and solutions with emphasis on field research techniques, empirical modeling, and nutrient budgetary approaches. Integrated research/service experiences.

Prerequisites: take BIO-350 and CHEM-135

BIO- 452 Wetland Ecology (4.00 cr.)

Repeatable: No

Physical, biological, and biogeochemical processes that influence wetland systems. Wetland classification, geomorphology, hydrology, biogeochemistry, soil development, succession, plant and animal adaptations, management, restoration, and protection. Techniques used to study wetlands in northern Wisconsin.

Prerequisites: take BIO-242 or BIO-252, and take CHEM-135

BIO- 460 Epidemiology (3.00 cr.)

Repeatable: No

Principles of epidemiology, determinants of major public health problems including infectious and chronic diseases, environmental health, and emerging threats.

Prerequisites: take BIO-386 or STAT-320

BIO- 462 Environmental Toxicology (3.00 cr.)

Repeatable: No

Environmental toxins found in the air, water, and soil and their impacts on the health and well-being of humans, animals, and plants. Detection, measurement, analysis, and regulation of select

classes of contaminants, including emerging contaminants of concern.

Prerequisites: take BIO-135 or BIO-136 or BIO-234, and take CHEM-135

BIO- 470 Advanced Biotechnology (5.00 cr.)

Repeatable: No

Molecular biotechnology, including manipulation of prokaryotic and eukaryotic cells, computer analysis of genomic and proteomic data, and applications in the biotechnology industry.

Instructor's consent

Prerequisites: take BIO-235 and BIO-370

BIO- 489 Advanced Biology Experience (1.00 - 4.00 cr.)

Repeatable: Yes

Experiences leading to deeper understanding of biological principles.

Instructor's consent

Must be Junior level or higher

BIO- 490 Histotechnician Laboratory Practicum I (15.00 cr.)

Repeatable: No

Techniques in tissue preparation, normal microscopic histology, instrumentation, histochemistry, embedding, routine staining, quality control, laboratory management, computer entry and safety.

Prerequisites: take CHEM-135, MATH-120, BIO-234, and FN-207

BIO- 491 Histotechnician Laboratory Practicum II (15.00 cr.)

Repeatable: No

Instrumentation used in processing tissues including the cryostat and automatic strainers and coverslippers, various staining techniques for identification of cellular components and bio-molecules. Techniques for tissue microtomy, embedding, frozen sectioning, routine and special staining. Special rotations include a visit to a veterinary lab and minimal cross-training in cytology specimen preparation.

Prerequisites: take BIO-490

BIO- 492 Histotechnician Laboratory Practicum III (6.00 cr.)

Repeatable: No

Specialization in immunoperoxidase, muscle biopsies, and exposure to electron microscopy. Theory in muscle biopsies, molecular pathology and immunohistochemistry (IHC). Techniques in IHC staining, basic slide interpretation and instrument training.

Prerequisite: take BIO-491

BIO- 493 Bioinformatics Practicum (3.00 cr.)

Repeatable: No

Experiences leading to deeper understanding of bioinformatics through participation in a "linked-courses" interdisciplinary learning community. Students will complete a faculty-advised semester research project, write a senior thesis describing their project, present the results in an appropriate research forum, and participate in the learning community journal club.

Prerequisite: take MSCS-492

BIO- 494 Cytotechnology Practicum I (16.00 cr.)

Repeatable: No

Theory and practical training in laboratory analysis of human cell morphology and its relation to diseases. Includes basic specimen handling, cytotechnology techniques, and microscopy. Focus is on the female reproductive, respiratory, gastrointestinal, genitourinary organ systems.

Prerequisites: take CHEM-135, MATH-120, BIO-234, and FN-207

BIO- 495 Cytotechnology II (16.00 cr.)

Repeatable: No

Theory and practical training in laboratory analysis of human cell morphology and its relation to diseases. Focuses on the following organ systems: effusions, central nervous system, fine needle aspirations, advanced clinical practice, advanced techniques, and management practices.

Prerequisite: take BIO-494

BIO- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUACT – Business Accounting

BUACT- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUACT- 200 Financial-Managerial Accounting- Engineering Technology (2.00 cr.)

Repeatable: No

Survey of financial accounting concepts for a sole proprietorship, partnership, and corporation. Managerial accounting concepts will be covered in use of the annual report, with emphasis on financial statement analysis.

BUACT- 201 Financial-Managerial Accounting (3.00 cr.)

Repeatable: No

Survey of financial accounting concepts for a sole proprietorship, partnership and corporation. Managerial accounting concepts will be covered in the use of the annual report, with emphasis on financial statement analysis including the cash flow statement and budgets.

BS Engineering Technology, Industrial Management, Applied Science and Graphic Communication Management students only

BUACT- 206 Introduction to Financial Accounting (3.00 cr.)

Repeatable: No

Introduction to accrual accounting using the accounting equation and accounting principles; includes preparing and analyzing basic financial statements, financial ratios, and accounting for sole proprietorships and partnerships.

Must be Sophomore level or higher

BUACT- 207 Introduction-Corporate and Managerial Accounting (3.00 cr.)

Repeatable: No

Study of accounting for corporations, methods of raising capital, analysis of financial statements, introduction to management accounting, product cost accounting systems, profit planning, management performance measures, and capital budgeting.

Prerequisite: take BUACT-206

BUACT- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUACT- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUACT- 312 Cost Accounting (3.00 cr.)

Repeatable: No

Emphasis on concepts and techniques of cost analysis. Application of cost information and discussion of techniques and budgeting.

Prerequisite: take BUACT-206

BUACT- 320 Income Tax Accounting (3.00 cr.)

Repeatable: No

Introduction of accounting and legal concepts underlying individual federal income tax laws applicable to gross income, exclusions, business and non-business deductions, gains and losses, credits and tax computations.

Prerequisite: take BUACT-206

BUACT- 335 Accounting For Management Decisions (3.00 cr.)

Repeatable: No

Interpretation of financial statements, internal control, budgeting, costing of products manufactured and sold, analysis of cost-volume-profit decisions. Data presented without mechanical techniques.

Prerequisite: take BUACT-207

BUACT- 346 Seminar (1.00 - 3.00 cr.)

Repeatable: Yes

Current Topics in business. (Title will reflect specific business content.)

BUACT- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUACT- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUACT- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUACT- 498 Business Accounting Field Experience (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand the challenges of being an effective manager.

Department consent

BUACT- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUFIN – Business Finance

BUFIN- 340 Business Finance (3.00 cr.)

Repeatable: No

Study of the techniques used to make investment, financing, and dividend decisions in order to maximize the value of the firm to its owners. Topics include: analysis of financial data in making investment decisions, working capital management, capital budgeting, capital structure, cost of capital, dividend policy and international finance.

Prerequisites: take BUACT-207, STAT-130 (or higher), and MATH-123 (or higher)

BUINB – Business International Business

BUINB- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUINB- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUINB- 260 International Business (3.00 cr.)

Global Perspective

Repeatable: No

Detailed analysis of international business functions including the global economy, financial systems, political structures, culture, and ethical implications of international business on sociocultural systems. Understanding and applying international business concepts is of primary importance.

Must be Sophomore level or higher

BUINB- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUINB- 338 International Logistics (3.00 cr.)

Repeatable: No

International logistics strategy: customer service, inventory, transportation, packaging, warehousing, storage, exporting, licensure, joint ventures, ownership documentation, terms of trading, organization, financial and management skills.

Prerequisites: take BUSCM-338

BUINB- 346 Seminar (3.00 cr.)

Global Perspective

Repeatable: No

Theory and practice of doing business in India by experiencing the culture first-hand. (Study abroad)

BUINB- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUINB- 367 International Management (3.00 cr.)

Global Perspective

Repeatable: No

Theory and practice of managing international organizations, including socio-cultural aspects and group dynamics of international businesses and service organizations.

Prerequisites: Take BUMGT-304

BUINB- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUINB- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUINB- 485 International Marketing (3.00 cr.)

Global Perspective

Repeatable: No

Principles and policies of marketing goods and services in international markets. Concepts, strategies and policies of world trade and multinational firms.

Prerequisites: take BUMKG-330

BUINB- 488 International Business Practicum (3.00 cr.)

Repeatable: No

Assist an actual business in developing their international marketing plan. Students, under the supervision of a faculty member, determine a product's foreign marketability.

Department consent

Prerequisite: take BUINB-485

BUINB- 489 International Business Policies (3.00 cr.)

Global Perspective

Repeatable: No

Students develop the ability to solve business problems in the international arena using a scientific approach to decision making by studying business cases on international policy formulation and administration, manufacturing, marketing, finance, accounting, personnel and public relations functions.

Prerequisites: Take any BUINB course; and take either BUMGT-304 or BUMKG-330 or BUACT-340; and take either ECON-201 or ECON-210

BUINB- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BULGL – Business Legal

BULGL- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BULGL- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BULGL- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BULGL- 318 Business Law I (3.00 cr.)

Repeatable: No

Law and ethics relative to businesses including the American legal system, the Constitution, contracts, torts, agency and sale of goods

are discussed and analyzed through the use of the Uniform Commercial Code, cases and problems. Examine the influence of technology and globalization on businesses with emphasis on law and business.

Must be Junior level or higher

BULGL- 319 Business Law II (3.00 cr.)

Repeatable: No

A continuation of Business Law I; includes property, secured transactions, bankruptcy, estates, commercial paper, partnerships, and corporations.

Prerequisites: take BULGL-318

BULGL- 346 Seminar (1.00 - 3.00 cr.)

Repeatable: Yes

Current Topics in business. (Title will reflect specific business content.)

BULGL- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BULGL- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BULGL- 401 Legal Environment Of Business (2.00 cr.)

Repeatable: No

Changing relationship of government and industry: regulatory legislation, administrative agencies, national policies and social control.

BULGL- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BULGL- 473 Legal Aspects Of Construction (3.00 cr.)

Repeatable: No

Analysis of contracts and documents used in building construction industry: rights of the parties. Labor relations: law and labor, legality of strikes, legality of picketing and boycott as economic pressure, unfair labor practices, employer and union, rights and responsibilities of supervisor and worker.

BULGL- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUMGT – Business Management

BUMGT- 100 Introduction To Business Administration (1.00 cr.)

Repeatable: No

Basic business systems processes, their interrelationships and role of business environment. Business Administration Program: advisement, course sequence and job opportunities.

Students must be Business Administration majors

BUMGT- 115 Understanding Business (2.00 cr.)

Repeatable: No

Concepts, functions, and interrelationships of various subdivisions of service and production organizations.

BUMGT- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUMGT- 235 Management Ethics (3.00 cr.)

Social Responsibility and Ethical Reasoning

Repeatable: No

Ethical issues organizational decision-makers face in developing stakeholder policies. Understanding essential ethical theories in relation to a broad array of management functions, concepts of corporate social responsibility and development of organizational ethics programs.

BUMGT- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUMGT- 296 Experience China: Global Business and Society (3.00 cr.)

Global Perspective

Repeatable: No

Introduction to values that serve as the foundation for American business organizations, the impact on our global economy, and business response to the challenges of globalization.

BUMGT- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUMGT- 304 Principles Of Management (3.00 cr.)

Repeatable: No

Management theories, concepts, techniques, and practices in a complex, dynamic, changing and globalizing business world. Application and analysis of functional or process approach to

management including planning, organizing, leading, controlling and determinants of managerial success.

BUMGT- 346 Seminar (1.00 - 3.00 cr.)

Repeatable: Yes

Current Topics in business. (Title will reflect specific business content.)

BUMGT- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUMGT- 398 Business Administration Field Experience (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand the challenges of being an effective manager.

Department consent

BUMGT- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUMGT- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUMGT- 480 Entrepreneurship: Small Business Planning (3.00 cr.)

Repeatable: No

Concepts, strategies, and applications involved in entrepreneurship. Profile of entrepreneurs and the risks and rewards, creating products and services for the market place, going into business--start-up, buy out, franchise--legal and financial aspects. Preparing a business plan required.

Prerequisite: take BUMKG-330 or BUACT-206 or BUACT-200

BUMGT- 489 Business And Industrial Internship (1.00 - 8.00 cr.)

Repeatable: Yes

Off-campus work and study in student's area of concentration; approved salaried position with cooperating company for a semester or summer session.

Department consent

Must be Junior level or higher

BUMGT- 490 Strategic Management And Business Policy (3.00 cr.)

Repeatable: No

Formulate, implement, and evaluate strategies in the context of a dynamic, global business environment. Optimize critical thinking,

reasoning, problem solving and presentation skills while becoming familiar with the knowledge, roles, and responsibilities required of managers.

Prerequisites: Must be Senior level or higher; take BUMKG-330 and BUACT-340; and take ECON-201 or ECON-210

BUMGT- 498 Business Administration Field Experience (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand the challenges of being an effective manager.

Department consent

BUMGT- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUMIS – Business Management Information Systems

BUMIS- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUMIS- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUMIS- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUMIS- 333 Management Information Systems - Decision Support Systems (3.00 cr.)

Repeatable: No

Exploration of business management decision making through utilization of computer software-based decision support systems; employs spreadsheet and database software as an aid to management in making, implementing and controlling decisions. topics include arithmetic, logical, and specialized functions; charting; tables; designing and modifying databases; and creating and editing database reports.

Prerequisite: take BUACT-206

BUMIS- 346 Seminar (1.00 - 3.00 cr.)

Repeatable: Yes

Current Topics in business. (Title will reflect specific business content.)

BUMIS- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUMIS- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUMIS- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUMIS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUMKG – Business Marketing

BUMKG- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUMKG- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUMKG- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUMKG- 308 Marketing For Non-Profit Organizations (2.00 cr.)

Repeatable: No

Strategic marketing planning process, marketing audit, marketing strategy development, positioning concept, market research, marketing mix, communication strategies and ethical issues for non-profit organizations.

Must be Sophomore level or higher

BUMKG- 330 Principles of Marketing (3.00 cr.)

Repeatable: No

Application of current theories to market goods and services to selected markets. Includes role of marketing within a society and firm, marketing mix variables, developing marketing strategy, segmenting markets, and analyzing environmental factors that impact the marketing activities.

BUMKG- 334 Professional Selling And Market Development (3.00 cr.)

Repeatable: No

Overview of selling as a profession; building relationships; the selling process, including prospecting, preparing, presenting, handling objections, closing, and servicing accounts; developing markets; and territory management.

Prerequisites: take BUMKG-330

BUMKG- 335 Sales Management (3.00 cr.)

Repeatable: No

Comprehensive survey of sales force management; organizing, staffing, and training a sales force; directing sales force operations; sales planning; and evaluating sales performance.

Prerequisite: take BUMKG-334

BUMKG- 346 Seminar (1.00 - 3.00 cr.)

Repeatable: Yes

Current Topics in business marketing. (Title will reflect specific content.)

BUMKG- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUMKG- 350 E-Business Strategy And Practice (3.00 cr.)

Repeatable: No

Development and growth of Internet marketing. An examination of e-business basics, business models, current and future trends, major issues, evaluation of model design and Internet marketing plans.

Must be Sophomore level or higher

BUMKG- 370 Principles Of Advertising (3.00 cr.)

Repeatable: No

Psychological, social and economic aspects of advertising in relationship to other aspects of distribution and its place in modern business.

Prerequisites: take BUMKG-330

BUMKG- 385 Target Marketing (3.00 cr.)

Repeatable: No

The study and application of methods used to identify viable market segments; use of demographic, psychographic and cultural research findings to successfully market products and services to various market segments.

Prerequisites: take BUMKG-330

BUMKG- 391 Principles of Social Media Marketing Management
(3.00 cr.)

Repeatable: No

Review of social media marketing management and the impacts that social media has on marketing strategy, operational strategies, social technology business models, how the conversation economy impacts business, internal and external engagement practices, customer service and reputation management, along with privacy and legal considerations.

Prerequisites: take HT-344 or BUMKG-330

BUMKG- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUMKG- 436 Marketing Management (3.00 cr.)

Repeatable: No

Examination of the marketing place with emphasis on unique characteristics of the marketing environment. Special emphasis on case study analysis and discussion.

Prerequisites: take BUMKG-330 and BUACT-207

BUMKG- 479 Marketing Research (3.00 cr.)

Repeatable: No

Experimental and survey techniques to secure information for successful marketing; primary and secondary sources; data collection, compilation and analysis methods; effective communication of conclusions and recommendations to management.

Prerequisites: take BUMKG-330 & either STAT-130, STAT-320, STAT-331 or ECON-325

BUMKG- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BURTL – Business Retail

BURTL- 105 Introduction to Retail Merchandising & Management
(1.00 cr.)

Repeatable: No

Explore structure, trends and careers in the retail business.

Understand the requirements for earning a degree in Retail Merchandising and Management, and identify resources designed to help students succeed at UW-Stout.

BURTL- 127 Basic Merchandising (3.00 cr.)

Repeatable: No

Analyzing the retailing process, the environment within which it operates, and the institutions and functions that are performed. A foundation for students who plan to work in retailing or related disciplines.

BURTL- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain

business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BURTL- 212 Trend Tracking And Forecasting (3.00 cr.)

Repeatable: No

Tracking and forecasting of product and consumer trends based on product lifecycle trends, fashion theories, socioeconomic and cultural factors, lifestyles, psychographic and demographic trends in the marketplace.

BURTL- 222 Computer Applications (2.00 cr.)

Repeatable: No

Microcomputer applications. Analysis of appropriate data bases. Evaluation of software. Hardware selection criteria appropriate to applications. Comparison of mainframe and microcomputer appropriate applications. Prediction of future applications.

Repeatable for various subunits.

BURTL- 229 Visual Merchandising (3.00 cr.)

Repeatable: No

Specialized study and application of merchandise/ product presentation techniques for individual displays and store designs. Interpreting basic design elements and principles for display; selecting and using of appropriate tools, fixtures, and materials; coordinating visual presentations and other promotional activities to achieve marketing objectives.

BURTL- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BURTL- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BURTL- 319 International Economic Trends In Textiles And Clothing
(3.00 cr.)

Global Perspective

Repeatable: No

Economic importance of the textile and apparel industries in the United States and the world.

Prerequisites: take APRL-140 and ECON-210

BURTL- 327 Store Management (3.00 cr.)

Repeatable: No

Develop management skills for retail stores of varying size.

Prerequisites: take BURTL-390

BURTL- 329 Retail Promotions (3.00 cr.)

Repeatable: No

Planning and execution of all the promotional messages used to communicate with members of a target market.

Prerequisite: take BURL-127

BURL- 335 Special Topics In Retail Merchandising And Management (1.00 - 3.00 cr.)

Repeatable: Yes

BURL- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BURL- 390 Merchandise Planning And Control (4.00 cr.)

Repeatable: No

Techniques for financial and unit planning, procurement and control of inventories for successful retail operations.

Prerequisites: Complete any GE Math course and BUACT-206

BURL- 395 Assortment Planning (3.00 cr.)

Repeatable: No

Methods of optimizing retail product assortments to gain a competitive advantage.

Prerequisites: take BURL-390 and APRL-202

BURL- 398 Field Experience (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in approved position to better understand challenges and potentials of various careers in merchandising and clothing and textile industries.

Department consent

BURL- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BURL- 417 Social/Psychological Aspects Of Clothing (3.00 cr.)
Global Perspective

Repeatable: No

Social and psychological influence of dress on individual and group behavior patterns.

BURL- 419 National Study Tour To Fashion Industry (1.00 cr.)

Repeatable: Yes

Five-day visit to New York or alternate city: study hours, discussions and lectures by leaders in American fashion market.

Department consent

Must be Junior level or higher

BURL- 425 Current Retail Strategies For A Differential Advantage (2.00 cr.)

Repeatable: No

Comparative analysis of specific retail corporations' strategies to

gain a differential advantage with their merchandising and operational methodology.

Prerequisites: Must be Senior level and have taken BURL-127

BURL- 426 Fashion Retailing Practicum (4.00 cr.)

Repeatable: No

Observation and structured experience in merchandising procedures dealing with complete operations and management of retail establishment.

Prerequisites: take BURL-329 and BURL-390

BURL- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BURL- 449F Retail Co-Op Education/Internship (1.00 - 6.00 cr.)

Repeatable: No

Full-time work and training in an approved position at a pre-selected business related to the student's major. Selection by application and interview.

Department consent

Prerequisites: take BURL-398, must be a Senior, and must have a 2.5 GPA in professional core courses.

BURL- 450 Retail Practicum I (2.00 cr.)

Repeatable: No

Strategic planning for merchandising and operating the student-operated laboratory store to include market analysis, assortment planning, product development, merchandise procurement, promotional planning, merchandise presentation and store layout.

Prerequisites: take BURL-390

BURL- 451 Retail Practicum II (2.00 cr.)

Repeatable: No

Structured experience in executing the merchandising and operation plan developed in Retail Practicum I to include evaluation of retail performance and projections for continuing operation of the student-operated retail store.

Prerequisites: take BURL-390 and BURL-450

BURL- 477 Study Abroad - American Fashion College (16.00 cr.)

Repeatable: No

A program for selected students which offers an opportunity to study at the American Fashion College in London with the opportunity to travel in Europe.

Department consent

Must have 2.5 GPA in Professional core and must be Apparel/Design & Development or Retail Merchandise/Management major.

BURL- 490 Advanced Merchandise Planning Control (3.00 cr.)

Repeatable: No

Application of merchandise theory and techniques to budget,

manage, and adjust actual purchases, inventory, and sales of an actual retail business.

Prerequisite: take BURL-390 with a "B" (3.0) or better.

BURL- 498 Field Experience (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in approved position to better understand challenges and potentials of various careers in merchandising and clothing and textile industries.

Department consent

BURL- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

BUSCM – Supply Chain Management

BUSCM- 100 Introduction to Supply Chain Management (1.00 cr.)

Repeatable: No

Overview of the B.S. in Supply Chain Management with emphasis on planning, career opportunities, and emerging trends.

BUSCM- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUSCM- 338 Principles Of Logistics (3.00 cr.)

Repeatable: No

Applies systems approach to plan movement and storage of raw materials, components and finished goods from point of origin to point of consumption. Focuses on transportation and warehousing decisions, channel structures, physical distribution, materials management, and supply chain concepts.

Prerequisites: take BUMKG-330

BUSCM- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUSCM- 437 Procurement, Sourcing And Supply Chain Management (3.00 cr.)

Repeatable: No

Processes used in procuring goods and services; analyzing and selecting global sources of supply; economics of total cost of ownership; importance of quality, delivery, ethics, and legal aspects of supplier management; negotiation principles. Recommended: proficiency with spreadsheet software.

Prerequisites: take BUMKG-330

BUSCM- 439 Seminar: Supply Chain Systems Design (3.00 cr.)

Repeatable: No

Synthesizing experience in supply chain, cases, problems and team/individual research will focus on analyzing, designing and modeling cost effective supply chain systems that utilize innovative technology and business practices for procuring, manufacturing, storing, and moving goods from suppliers, manufacturers, distributors, retailers and end customer.

Prerequisites: take BUMKG-438 and INMGT-305

BUSCM- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

BUSCM- 458 Negotiation and Contracts (3.00 cr.)

Repeatable: No

Processes, analysis, techniques and strategies used to negotiate and develop contracts. Defining roles and importance of relationships. Identifying interests, developing and using power, creating and evaluating criteria, exploring options, analyzing offers, dealing with objections and impasses, reaching final agreement. Converting business agreements into contracts. Importance of fairness and ethics.

Prerequisite: take BUMKG-337

BUSCM- 460 Supply Chain Management Design I Capstone (3.00 cr.)

Repeatable: No

Synthesizing capstone experience focuses on planning, diagnosing and analyzing root causes of poor supply chain cost, service and operational performance. Students analyze and diagnose supply chains for strategy, organization, process, technology, business models, best practices, and information and material flow.

Prerequisites: take BUSCM-338, INMGT-320, INMGT-325, INMGT-365, INMGT-405, INMGT-440, BUSCM-437, and BUACT

BUSCM- 461 Supply Chain Management Design II Capstone (3.00 cr.)

Repeatable: No

Continuation of Supply Chain Design I focusing on design, model and recommended integrated supply chain solutions from the perspective of strategy, people, technology, business models, and best practices for managing the flow of goods and information across the supply chain.

Prerequisite: take BUSCM-460

CAHSS – College of Art, Humanities and Social Sciences

CAHSS- 196 An Interconnected World: Views From The Humanities (3.00 cr.)

Interdisciplinary Studies

Repeatable: No

Draws on history, literature, drama, philosophy, art, and music in order to examine selected issues or problems that have faced humankind around the world during the past two centuries.

CAHSS- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CAHSS- 205 Scotland: Society And Globalization (3.00 cr.)

Humanities and the Arts - Art History/Music Apprec, Humanities and the Arts - History, Social and Behavioral Sciences - Economics, Social and Behavioral Sciences - Political Science, Social and Behavioral Sciences - Sociology

Repeatable: No

A wide-ranging course that explores the different aspects of contemporary Scottish society. Locating Scotland in its historical and global contexts, the course focuses on many of the key social, economic, cultural and political issues that face Scotland today. In particular, it considers many of the ways that globalization can be said to be impacting on Scottish economy and society. Multi- and inter-disciplinary approach drawing on sociology, social policy, social history, and human geography.

CAHSS- 210 Scotland: Heritage and Culture (3.00 cr.)

Global Perspective, Interdisciplinary Studies

Repeatable: No

Exploration of themes in Scottish culture. Engagement in the Scottish cultural traditions, heritage, geography, sports, and societal features of modern Scotland.

Department consent

CAHSS- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

CAHSS- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CAHSS- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

CAHSS- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CAHSS- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

CAHSS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CEE – Computer/Electrical Engineering

CEE- 205 Circuit Analysis and Design (4.00 cr.)

Repeatable: No

Kirchhoff's voltage/current laws, node/loop analysis, dependent sources and operational amplifiers. Modeling ideal/real resistors/capacitors/inductors, steady state/transient behavior of circuits. Sinusoids, phasors, impedance, steady state AC analysis, power factor, resonance, and frequency response. Single/three-phase power distribution and transformers. MultiSim, MATLAB, Function generators and oscilloscopes in laboratory.

Prerequisite: take MATH-154 or MATH-157

CEE- 215 Electronics (4.00 cr.)

Repeatable: No

Introduction to the physics/modeling of semiconductor devices such as diodes and transistors. Biasing, small/large signal circuit behavior, temperature dependence. Differential/multistage/power amplifiers. Time and frequency response of devices and circuits, including operational amplifiers. Discussion of integrated circuit fabrication technology.

Prerequisite: Take CEE-205

CEE- 225 Digital Logic (3.00 cr.)

Repeatable: No

Analysis and design of combinational and sequential logic circuits. Boolean algebra, number systems and logic gates. Realization of Boolean Functions. Synchronous and asynchronous sequential logic: counters and registers. Finite state machines, state transitions and state equivalence. Logic circuit simulation. Discrete gates and array logic laboratory experiments.

Prerequisite: take CEE-205 (or concurrent registration)

CEE- 235 Signals and Systems (3.00 cr.)

Repeatable: No

Continuous-time and discrete-time signals and systems; representation and analysis of linear, time-invariant systems; differential and difference equations; convolution; Fourier, Laplace and Z-transforms; Fourier series; time- and frequency-domain analysis; sampling theorem; introduction to advanced signal processing topics.

Prerequisites: take CEE-205 and MATH-250

CEE- 325 Digital System Design (3.00 cr.)

Repeatable: No

Analysis of combinational and sequential logic and state machine designs. Circuit realization utilizing CADD tools on field programmable gate array devices. Behavioral and structural modeling of digital system designs through implementation of computer system components, and memory using hardware description language.

Prerequisites: Take CEE-205 and CEE-225

CEE- 335 Automatic Control Systems (4.00 cr.)

Repeatable: No

Classical methods of analysis and design for continuous-time control systems with Laplace transform techniques for solving differential equations, modeling of dynamic systems in time and frequency domains, root-locus and stability analysis. Introduction to controller design and programming for embedded-servo control systems and PC-based data acquisition in controls.

Prerequisites: take CEE-235 and CS-244

CEE- 345 Microprocessor System Design (3.00 cr.)

Repeatable: No

Study of the internal organization of microprocessors, instruction sets, timers and interrupts, and serial and parallel ports programming using Assembly and C languages. The design and interfacing of peripherals for a selected microprocessor and use of debugger hardware including an in-circuit serial programmer unit.

Prerequisites: take CEE-325 and CS-245

CEE- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

CEE- 355 Applied Electromagnetics (3.00 cr.)

Repeatable: No

Engineering applications of electromagnetic fields. Review of vectors, static electric and magnetic fields, the electromagnetic spectrum, Maxwell's equations and electromagnetic wave propagation in various guided and unguided media. Relationship between circuit theory and electromagnetic fields, transmission lines, waveguides and antennas. Use of computer aided analysis tools.

Prerequisites: take CEE-205 and PHYS-282

CEE- 405 Capstone I: Computer Engineering Design (2.00 - 3.00 cr.)

Repeatable: No

First of two-semester sequence in capstone design. Creation of a conceptual design to solve a hardware and software problem that requires research, problem solving, teamwork, communication skills, project management, documentation, simulation, experimentation, and other skills acquired during computer engineering undergraduate study.

Prerequisites: Take CEE-325, CEE-335, and CEE-345

CEE- 410 Capstone II: Computer Engineering Design (2.00 - 3.00 cr.)

Repeatable: No

Continuation of CEE-405. Implementation, prototyping, and testing of the conceptual design developed in CEE-405; efficient management of time and resources for the successful completion of the project. Status reports, a project report, and a final presentation are required.

Prerequisite: take CEE-405

CEE- 425 Data Communications and Computer Networks (3.00 cr.)

Repeatable: No

Design and implementation of data communications and computer network systems. Open systems interconnect models vs internet models. Transport control protocol/internet protocol algorithms, routing techniques, network security, network management, traffic characterization using discrete-time simulation tools by applying statistical methods, hardware development and implementation of network enabled devices.

Prerequisites: take CEE-235 and CS-441 (or concurrent registration)

CEE- 435 Digital Signal Processing (3.00 cr.)

Repeatable: No

Fourier analysis of continuous-time and discrete-time signals and systems; sampling theory, aliasing and signal reconstruction; analysis of sampled signals; discrete and Fast Fourier transforms; z-transform; discrete convolution; design of digital finite impulse response (FIR) and infinite impulse response (IIR) filters; practical applications with simulation programs and hardware systems.

Prerequisite: take CEE-235

CEE- 445 Embedded System Design (3.00 cr.)

Repeatable: No

Structured approach to the development and design of microprocessor, microcontroller, and mixed-signal embedded systems. Microprocessor types, memory structures, interrupt control, external interfacing, embedded sensing, and software including assemblers and higher level language support will be emphasized. Laboratory experiments for the design and implementation of an embedded system project.

Prerequisite: take CEE-345

CEE- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

CEE- 455 Fundamentals of Wireless Communications (3.00 cr.)

Repeatable: No

Design and analysis of wireless communication systems, frequency allocations, network architectures. Amplitude, frequency and phase modulation. Time and frequency multiplexing. Information content, channel bandwidth, modulation schemes. Calculation of path loss, fading, scattering and shadowing. Signal encoding and error control. Broadband, spread spectrum and multiple access systems.

Prerequisites: take CEE-235 and CEE-355 (or concurrent registration)

CEE- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CEHHS – College of Education, Health and Human Sciences

CEHHS- 449 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview.

Department consent

CEHHS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CHEM – Chemistry

CHEM- 105 Visualizing Chemistry (2.00 cr.)

Natural Science

Repeatable: No

Simple demonstrations that illustrate and reinforce understanding of the physical and chemical properties of matter. Description of the underlying chemistry and chemical safety. A special course fee applies.

CHEM- 110 Chemistry in Our World (4.00 cr.)

Contemporary Issues, Laboratory, Natural Sciences - Physical Sciences

Repeatable: No

Fundamental role of chemistry in our daily lives focusing on contemporary issues to introduce chemical concepts, developing these concepts in a concerted manner to gain understanding of the issues.

Requires Math proficiency greater than or equal to MATH-110

CHEM- 115 General Chemistry (5.00 cr.)

Natural Science with Lab

Repeatable: No

Fundamental principles of chemistry with applications: composition and structure of matter, formation and naming of compounds, mole concept, writing and balancing chemical equations, types of reactions, elementary stoichiometry, bonding, states of matter, equilibrium, solutions, acids and bases. Students may incur incidental expenses for software.

Math Placement or MATH-110 required.

CHEM- 125 Principles Of Chemistry For Health Sciences (5.00 cr.)

Natural Science, Laboratory

Repeatable: No

Principles of chemistry: general, reaction stoichiometry, equilibrium

and thermodynamics. Students may incur incidental expenses for software.

Math Placement or MATH-110 required.

CHEM- 135 College Chemistry I (5.00 cr.)

Natural Science with Lab

Repeatable: No

Principles of inorganic chemistry, properties of important elements and compounds. More rigorous approach and more extensive coverage than in CHEM-115. Normally followed by CHEM-136.

Students may incur incidental expenses for software.

Math Placement or MATH-120

CHEM- 136 College Chemistry II (5.00 cr.)

Natural Science with Lab

Repeatable: No

Reactions and properties of common elements and inorganic compounds; oxidation-reduction and solution equilibria; electrochemistry. Lab work in qualitative analysis for common ions. Students may incur incidental expenses for software.

Prerequisites: take CHEM-135 or take MATH-120 and CHEM-125

CHEM- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CHEM- 201 Organic Chemistry I (4.00 cr.)

Repeatable: No

Chemistry of carbon compounds: naming, bonding, structure, physical characteristics, reactions. Compounds include hydrocarbons, aromatic compounds, alcohols, ethers, aldehydes, ketones, acids, esters, amines, amides, thiols and sulfides.

Laboratory exercises on compound characteristics (physical and chemical), compound identification, reactions and reaction types. Students may incur incidental expenses for software.

Prerequisite: Take either CHEM-125 or CHEM-135

CHEM- 204 Organic Chemistry II Lecture (3.00 cr.)

Repeatable: No

Continuation of Organic Chemistry I; organic reactions, organic compound synthesis, reaction to mechanisms and kinetics, transition state theory, thermodynamics; introduction to IR, NMR and UV-visible spectroscopy of organic compounds.

Prerequisite: take CHEM-201

CHEM- 206 Organic Chemistry II Laboratory (1.00 cr.)

Repeatable: No

Systematic identification of organic compounds using chemical, physical, and instrumental methods with option for organic compound synthesis.

Prerequisite: take CHEM-201; Corequisite: take CHEM-204

CHEM- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the

previous.
Instructor's consent

CHEM- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes
Department consent

CHEM- 301 Physical Chemistry Lecture (3.00 cr.)

Repeatable: No
Fundamental physical chemistry; behavior of gases, liquid state, properties of solutions, principles of thermodynamics, thermochemistry. Taken concurrently with CHEM-303. Students may incur incidental expenses for software.
Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135, and take MATH-156; Corequisite: CHEM-303

CHEM- 303 Physical Chemistry Laboratory (1.00 cr.)

Repeatable: No
Lab course to be taken concurrently with CHEM-301. Experimental techniques and apparatus; treatment of experimental data.
Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135, and take MATH-156; Corequisite: take CHEM-301

CHEM- 311 Biochemistry (4.00 cr.)

Repeatable: No
Fundamental chemistry and metabolism of carbohydrates, lipids and proteins; second- and third-order structure of proteins; chemistry of nucleic acids; nature and dynamics of enzymes and enzyme action; biological oxidations; lab work in metabolism, chromatography, enzyme action, qualitative and quantitative analytical procedures.
Prerequisite: take CHEM-201

CHEM- 315 Food Chemistry (3.00 cr.)

Repeatable: No
Organic biochemistry of foods: enzymatic and non-enzymatic changes associated with food preparation and storage (Maillard-Browning reaction), denaturation of protein, changes in color, odor, texture and nutritive value. Techniques for isolation and identification of biochemical constituents of foods.
Prerequisites: take CHEM-201

CHEM- 325 Chemistry Of Polymers (4.00 cr.)

Repeatable: No
Basic science of polymers. Common industrial polymers and their applications. Relationship of the structure and salient structural features of industrial polymers with their properties and applications.
Prerequisite: take CHEM-135

CHEM- 331 Quantitative Analysis (3.00 cr.)

Repeatable: No
Introduction to the principles of quantitative chemical analysis and training in precision laboratory techniques.
Prerequisite: take CHEM-136

CHEM- 335 Instrumental Methods Of Analysis (3.00 cr.)

Repeatable: No
Application of instrumental methods to chemical analysis: electrochemical, spectrophotometric, chromatographic, and thermal analysis. Techniques for methods development, sample preparation, optimization of operating conditions, and data analysis needed to obtain accurate, reproducible results by means of instrumentation.
Prerequisite: take CHEM-331

CHEM- 341 Chemistry Of Materials (4.00 cr.)

Repeatable: No
Relationship of the chemistry and microstructure of structural materials (metals, polymers and ceramics) to their properties; degradation of those materials, corrosion of metals, polymers and ceramics.
Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135

CHEM- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes
Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.
Department consent

CHEM- 353 Environmental Chemistry (3.00 cr.)

Repeatable: No
Principles and origins of chemical reactions that lead to ecological imbalance; systems that have contributed to large-scale environmental pollution or are of current importance; chemical technology needed to correct imbalance.
Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135

CHEM- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes
Department consent

CHEM- 412 Advanced Biochemistry (3.00 cr.)

Repeatable: No
Structure and function of enzymes and membrane-bound proteins, enzyme kinetics and mechanism, and regulatory mechanisms of metabolism at the molecular, cellular and organismal levels.
Prerequisite: take CHEM-311

CHEM- 440 Advanced Materials Laboratory (1.00 - 3.00 cr.)

Repeatable: Yes
Student-devised laboratory experiments to solve a materials problem provided by the instructor.
Instructor's consent
Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135

CHEM- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes
Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the

previous.
Department consent

CHEM- 452 Environmental Regulations Management (3.00 cr.)

Repeatable: No

Laws governing environmental issues. Environmental regulations, applicability of the laws, and resources for interpreting the regulations. Evaluation of environmental research.

Prerequisites: take CHEM-115 or CHEM-125 or CHEM-135

CHEM- 489 Advanced Chemistry Experience (1.00 - 4.00 cr.)

Repeatable: Yes

Research experiences leading to a greater depth of understanding of chemical principles.

Instructor's consent

Must be Sophomore level or higher

CHEM- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CHIN – Chinese

CHIN- 101 Elementary Chinese I (4.00 cr.)

Communication Skills Language, Global Perspective

Repeatable: No

Elementary modern Mandarin, for students with no previous training.

CHIN- 102 Elementary Chinese II (4.00 cr.)

Communication Skills Language, Global Perspective

Repeatable: No

Continuation of Elementary Chinese 101.

CHIN- 196 Experience China: Mandarin Language (3.00 cr.)

Foreign Language Global Perspective, Foreign Language and Culture

Repeatable: No

Introductory reading, writing, listening and speaking skills; and understanding Chinese culture and society.

Department consent

CHIN- 200 Intermediate Chinese I (4.00 cr.)

Communication Skills Language

Repeatable: No

Build on skills learned in CHIN-102 to improve all four aspects of Chinese language acquisition: speaking, listening, reading and writing.

Prerequisite: take CHIN-102

CMG – Cross-Media Graphics

CMG- 141 Cross-Media Graphics (3.00 cr.)

Repeatable: No

Overview of the cross-media graphics field and careers. Hands-on introduction to the graphics process from design through delivery. Use of graphics software to design and develop projects for cross-media, multi-channel distribution - print, web, email and mobile. Printing processes, bindery and finishing operations, and specifying printed products and non-print graphic services.

CMG- 151 Graphics Software Tools (3.00 cr.)

Repeatable: No

Graphics software tools and processes for production/development of print and non-print graphics projects. Software features and application, image capture/creation, page layout, web development, imposition principles, proofing, and platemaking.

Prerequisite: take CMG-141

CMG- 251 Premedia Graphics Production (3.00 cr.)

Repeatable: No

Optimization of digital creation, capture and manipulation of graphics for print and digital distribution. Premedia systems, workflow, color theory, digital photo, bitmap and vector graphic creation and editing. File and font management, document layout, automation, proofing, preflight and submission of files for output.

Prerequisite: take either CMG-151 or DES-220

CMG- 266 Press Systems (3.00 cr.)

Repeatable: No

Imaging of various substrates utilizing common printing processes. Offset lithography, flexography, gravure, and digital reproduction methods. Image carriers, press systems, process control, ink, toners, and substrates.

Prerequisite: take CMG-141

CMG- 270 Postpress Operations (3.00 cr.)

Repeatable: No

Current and emerging technologies for postpress operations in bindery and finishing. Postpress production and job planning from the postpress perspective. Quality control tools and techniques as applied to postpress operations.

Prerequisite: take CMG-141

CMG- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

CMG- 351 Cross-Media Personalization (3.00 cr.)

Repeatable: No

Software, systems and processes used to plan and produce personalized and integrated cross-media (Web, print, e-mail, mobile, digital media) marketing/promotion campaigns. Databases, layout issues, dynamic content (text, images, charts and graphs), scripting, automation, variable data digital printing and personalization, through design platforms and web storefront interaction.

Prerequisites: take CMG-251 and ICT-375

CMG- 355 ePublishing (3.00 cr.)

Repeatable: No

Techniques and processes for creating published digital media. Design considerations, file formats, digital asset and rights management, digital publishing standards and issues specific to long documents. Portable Document Format files, eBook formats and other standards for digital documents. Extensible Markup Language (XML) in print and digital media workflows.
Prerequisite: take CMG-251

CMG- 362 Screen and Specialty Printing (3.00 cr.)

Repeatable: No

Screen, and other specialty printing on a variety of substrates. Wide format, three-dimensional, lenticular, cut vinyl graphics, dye sublimation, pad printing, laser marking/engraving, issues and process-control concerns unique to these image transfer methods. Special course fee applies.
Prerequisite: take CMG-141

CMG- 367 Color Management (3.00 cr.)

Repeatable: Yes

Industry Standards-based color management practices for accurate color reproduction throughout both RGB and CMYK workflows. Colorimetric and densitometric analysis, device calibration, and profiling strategies. Color management applications, devices and best practices for controlling image capture, image display, electronic publishing, soft proofing and printing.
Prerequisites: take CMG-251 and CMG-266 and take either STAT-130 or STAT-320

CMG- 368 Print Optimization (3.00 cr.)

Repeatable: No

The application of industry specifications to optimize print reproduction. Instrumentation, press fingerprinting and applied color management.
Prerequisite: take CMG-367

CMG- 380 Cross-Media Estimating and Planning (3.00 cr.)

Repeatable: No

Cross-media graphics workflow management issues including cost of production or services, estimating practices, planning and scheduling of both print and non-print graphic projects.
Prerequisites: take CMG-251, CMG-266 and CMG-270

CMG- 443 Cross-Media Practicum (3.00 cr.)

Repeatable: Yes

Integration of all cross-media graphics processes in the design and production of print and non-print graphic products and services for clients in the university community. Special emphasis on the process and workflow management roles of estimating, customer service, scheduling, planning, production supervision and quality control.
Prerequisites: take CMG-380

CMG- 445 Publication Production (3.00 cr.)

Repeatable: No

Cross-discipline work teams experience integration of creative,

technical and managerial skills to design, plan, schedule, produce and distribute print and digital versions of a publication.

Prerequisite: take CMG-355

CMG- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.
Department consent

CMG- 482 Graphics Workflow Automation (3.00 cr.)

Repeatable: No

Emerging trends in graphics workflow automation. Utilization of Job Definition Format (JDF) files to streamline digital workflow and integrate with production and management information systems. Asset management integration, file preflighting and repair, scripting, Web-to-Print integration, and workflow customization.
Prerequisites: take CMG-380

CMG- 495 Cross-Media Seminar (3.00 cr.)***Global Perspective***

Repeatable: Yes

Overview of the graphic communications industry; its size, market segments, profitability and organization. Research and analysis of company annual reports. Strategic planning, management and leadership, industry trends and forecasts, trade organizations, news and other information sources. Impact of technology, global issues, and competing information distribution channels.

Must be Senior level or higher

CNS – Cognitive Neuroscience**CNS- 200 Introduction To Cognitive Neuroscience (3.00 cr.)*****Natural Science, Social and Behavioral Sciences - Psychology***

Repeatable: No

Cognitive and neural processes that support higher mental functions and methods by which inferences about the brain bases of cognition are made.

CNS- 201 Introduction To Cognitive Neuroscience Lab (1.00 cr.)***Natural Science with Lab, Natural Sciences - Life Sciences***

Repeatable: No

Cognitive neuroscience experimental techniques including behavioral and electrophysiological methods of research. Measurement, analysis and presentation of laboratory data on cognitive neuroscience, such as neuronal properties, sensation, memory, perception, learning and attention.
Corequisite: CNS-200

CNS- 401 Prime Time Cognitive Neuroscience (2.00 cr.)

Repeatable: No

Public perceptions of cognitive neuroscience, using television

programs as a lens. Examination of the disconnect between public perceptions and scientific reality.

CNS- 401 Special Topic: Psychology, Neuroscience, and Evolution (3.00 cr.)

Repeatable: No

Examines the application of evolutionary theory of the study of human behavior and the brain. Focus on the evolutionary bases of important phenomena such as sensation and perception, consciousness, emotions, personality, and a variety of social behaviors. Emphasis on thinking critically and writing about research.

Prerequisite: take PSYC-110

CNS- 480 Cognitive Neuroscience Research Experience (1.00 cr.)

Repeatable: Yes

Design, execution, analysis, and reporting of faculty-supervised, cognitive neuroscience-related research.

Instructor's consent

Prerequisites: take CNS-200, CNS-201, STAT-130, and PSYC-391

CNS- 481 Computational Cognitive Neuroscience (4.00 cr.)

Repeatable: No

Basic principles of computational cognitive neuroscience. Simulating cognition using biologically based networks of neuron-like units (neural networks).

Prerequisites: MATH-120, STAT-130, CNS-200 and CNS-201

CNS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

COGS – Cognitive Science

COGS- 101 Cognitive Science I (4.00 cr.)

Repeatable: No

Multidisciplinary approaches to cognitive science from the fields of psychology, computer science philosophy, neuroscience, and anthropology. Laboratory-based research methods.

Prerequisite: Take PSYC-110

COGS- 202 Cognitive Science 2 (4.00 cr.)

Repeatable: No

Cognitive science research methodologies and problem-based laboratory exercises related to major cognitive science concepts.

Prerequisite: Take COGS-101

COGS- 390 Cognitive Science Research Studio 1 (2.00 cr.)

Repeatable: No

Cognitive Science research skills related to conducting a directed research project: literature reviews, meta-analysis, empirical research design, theory development, and testing of research applications.

Prerequisites: take PSYC-290 and COGS-202

COGS- 490 COGS Research Studio 2 (2.00 cr.)

Repeatable: No

Advanced cognitive Science research skills related to conducting and original research project: literature reviews, meta-analysis, empirical research design, theory development, creation and testing of original applications.

Prerequisite: take COGS-390

COM – College of Management

COM- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

COM- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.

Department consent

COM- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.

Department consent

COM- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.

Department consent

COUN – Counseling

COUN- 149 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department consent

COUN- 249 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods,

each one building and expanding on the previous one.
Department consent

COUN- 349 Cooperative Education Experience (1.00 - 6.00 cr.)
Repeatable: Yes
Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.
Department consent

COUN- 399 Independent Study (1.00 - 3.00 cr.)
Repeatable: Yes
Department consent

COUN- 400 Workshop In Counseling (1.00 - 3.00 cr.)
Repeatable: Yes
Current specialized topics studied through experiential activities.

COUN- 405 Introduction To Basic Counseling Skills (3.00 cr.)
Repeatable: No
Develop basic helping skills including active listening; problem solving, goal setting, and decision-making; conflict resolution; information giving; assertion skills; and making referrals. Applicable when basic counseling is an appropriate helping response and also in any interpersonal relationship, including people with disability and ethnic diversity issues.

COUN- 406 Peer Supervisory Experience (1.00 cr.)
Repeatable: Yes
Experience in observation and feedback to peers undergoing counseling skill training.
Instructor's consent

COUN- 447 Assessment And Treatment Of Eating Disorders (2.00 cr.)
Repeatable: No
Description and diagnostic criteria for anorexia nervosa, bulimia nervosa, obesity, and compulsive overeating. Psychological, sociological, and familial influences on the development of the disorders. Assessment instruments, approaches, and treatment considerations.

COUN- 449 Cooperative Education Experience (1.00 - 6.00 cr.)
Repeatable: Yes
Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.
Department consent

COUN- 494 Counseling Older Persons (2.00 - 3.00 cr.)
Repeatable: No
Training service providers in counseling skills and gerontology through discussion, observation and supervised counseling experiences.

COUN- 499 Independent Study (1.00 - 3.00 cr.)
Repeatable: Yes
Department consent

CS – Computer Science

CS- 141 Introduction to Programming (3.00 cr.)
Computer Science
Repeatable: No
Solving problems using computer programming. Input/output, user interface, objects, events, flow of control, functions, arrays.

CS- 144 Computer Science I (4.00 cr.)
Computer Science
Repeatable: No
Problem solving using a high-level programming language. Graphical user interfaces, object-oriented programming, event handling, documentation, flow of control, testing, input/output, arrays.

CS- 145 Computer Science II (4.00 cr.)
Repeatable: No
Basic concepts in computer systems including computer structure, assembly languages, addressing techniques, program segmentation and linkage. Problem solving using a high-level programming language. Procedural programming concepts, string processing, searching and sorting algorithms, pointers, dynamic memory allocation, memory management, linear data structures, recursive structures, object-oriented programming, and debugging.
Prerequisite: take CS-144

CS- 199 Independent Study (1.00 - 3.00 cr.)
Repeatable: Yes
Department consent

CS- 244 Data Structures (4.00 cr.)
Repeatable: No
Concepts and foundations of data structures and algorithms. Introduction to analysis of algorithms and linear structures, vectors, linked lists, stacks, queues and priority queues. Non-linear data structures such as trees, tree traversals, binary trees, binary search trees and graphs. Advanced sorting and searching techniques. Hashing, heaps.
Prerequisite: take CS-145

CS- 245 Introduction To Computer Organization (3.00 cr.)
Repeatable: No
Basic concepts in computer systems including computer structure, machine language, assembly languages, addressing techniques, macros, file I/O, program segmentation and linkage.
Prerequisite: take CS-145

CS- 248 Web and Internet Programming (3.00 cr.)
Repeatable: No
Design and implementation of web and internet software systems using current programming languages, scripting languages, and

interface standards. Network programming and client/server applications. Support for database access via web programs.

Prerequisite: Take CS-141 or CS-144

CS- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CS- 326 Programming Interaction in 3D Game Environments (3.00 cr.)

Repeatable: No

Introduction to a 3D game programming environment with focus on programming interaction of game objects, physics, programmable effect systems and Heads-Up-Display (HUD).

Prerequisite: take CS-244

CS- 342 Survey Of Programming Languages (3.00 cr.)

Repeatable: No

Programming languages and language design. Comparative study of three modern high level languages and their application strengths for systems programming, embedded computer systems and artificial intelligence.

Prerequisites: take CS-244 and CS-245

CS- 343 Mathematical Foundations Of Computer Graphics (3.00 cr.)

Repeatable: No

Fundamental hardware, software, mathematics, data structures and algorithms for computer graphics.

Prerequisites: take CS-244 and MATH-275, and take either MATH-158 or MATH-154 or PHYS-281

CS- 345 Image Processing (3.00 cr.)

Repeatable: No

Theory and applications of digital image processing. Mathematical foundations and algorithms for enhancement, restoration, compression, segmentation and reconstruction from projections.

Prerequisites: take MATH-255, MATH-275, CS-244, and STAT-332

CS- 346 Simulation Modeling And Analysis (3.00 cr.)

Repeatable: No

Simulation as a problem-solving technique; models, analysis and languages for simulation; data collection; random variate generation; verification and validation; output analysis; optimization of systems.

Prerequisites: take CS-244 and STAT-332

CS- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

CS- 354 Algorithms and Artificial Intelligence (3.00 cr.)

Repeatable: No

Introduction to the design and analysis of computer algorithms.

Concepts of artificial intelligence and machine learning to enhance analytical and problem solving skills.

Prerequisite: take CS-244

CS- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CS- 441 Computer Architecture (3.00 cr.)

Repeatable: No

Hierarchical organization of a computer system: CPU, memory, I/O modules. Detailed analysis of the CPU and control unit implementation.

Prerequisites: take CS-244 and CS-245

CS- 442 Systems Programming (3.00 cr.)

Repeatable: No

Design, organization and case studies of major systems software: assemblers, loaders, linkers, macro processors, compilers, and operating systems. Relationship between machine architecture and system software.

Prerequisite: take CS-441

CS- 443 Database Systems Manipulation And Design (3.00 cr.)

Repeatable: No

Conceptual and logical organization of data, data models, data manipulation and data definition languages, and design of databases. Distributed database systems; integrity, constraints, concurrency, security, and query optimization.

Prerequisite: take CS-244

CS- 448 Software Engineering (3.00 cr.)

Repeatable: No

Software development lifecycle, programming languages and environments, program testing, documentation, software management and organization. Class software development project.

Prerequisite: take CS-244

CS- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

CS- 458 Advanced Software Engineering (3.00 cr.)

Repeatable: No

Semester-long software engineering project based on an applied real life problem. Advanced models of modern software development process. An in-depth exposure to the latest technologies and trends in software engineering: architecture, process, frameworks, methodologies, and tools. Software metrics, quality, management, reliability, testing, integration, verification, validation, deployment, and maintenance.

Prerequisite: take CS-448

CS- 480 Introduction To Computer Security (3.00 cr.)

Repeatable: No

Computer security problems and challenges, relationship between policy and security, cryptography, implementation of requirements imposed by policies, use of standards to ensure that the system will meet its goals, system vulnerabilities analysis and detection, intrusion detection, application of desired policy and procedures to support the policy.

Prerequisite: take CS-245

CS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CSTEM – College of Science, Technology, Engineering & Math

CSTEM- 125 Gender and Science, Technology, Engineering and Mathematics (3.00 cr.)

Global Perspective

Repeatable: No

Issues surrounding women and men in STEM fields; representation of women in these fields, reasons for under-representation; global ethnic and historical perspectives.

CSTEM- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

CSTEM- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.

Department consent

CSTEM- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.

Department consent

CSTEM- 390 Technical Service Schools (0.50 - 6.00 cr.)

Repeatable: Yes

Some special-purpose technical courses offered by manufacturers are suitable for college credit. Guidelines: (1) Student makes all arrangements with manufacturer offering courses; (2) One credit is awarded for each full week (40 hours) of attendance; (3) Student enrolls and pays fees prior to taking course; (4) Approval of dean of

school of industry and technology needed before enrolling for credit; (5) Graduate college approval required for students taking course for graduate credit.

Department consent

CSTEM- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring supervised work periods, each one building and expanding on the previous.

Department consent

CTE – Career & Technical Education

CTE- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

International students majoring in Vocational, Technical and Adult Education will participate in an internship located in both industrial/business and vocational/technical institutions to have experience in their technical area.

Department consent

CTE- 198 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

CTE- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CTE- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

International students majoring in Vocational, Technical and Adult Education will participate in an internship located in both industrial/business and vocational/technical institutions to have experience in their technical area.

Department consent

CTE- 298 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

CTE- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CTE- 301 Preservice Workshop For Career And Technical Educators (1.00 cr.)

Repeatable: No

Introduction to the basic concepts of teaching courses in Wisconsin career and technical education.

CTE- 302 Principles of Career And Technical Education (2.00 - 3.00 cr.)

Repeatable: No

Importance of career and technical education (workforce education) to American society and the individual. Actively apply principles into practice. Formulate a philosophy of workforce education based on personally held principles and demonstrated practices.

CTE- 310 Foundations Of Health Sciences Occupations Education
(3.00 cr.)

Repeatable: No

The philosophy, organization and administration of health science occupations education at the national, state and local level; includes current topics in health science occupations education with application for personnel in the field.

CTE- 320 Careers In Health Care (3.00 cr.)

Repeatable: No

Investigation of health care delivery system, services, occupations, related health services, and the health sciences career clusters.

CTE- 330 Curriculum Planning In Health Science Occupations (3.00 cr.)

Repeatable: No

Competency-based and individualized approaches to principles of curriculum and course construction, study of curriculum terminology, methods of selecting and organizing content for health science occupations educators.

CTE- 334 Performance Analysis (3.00 cr.)

Repeatable: No

Analysis techniques utilized in curriculum development. Emphasis on task analysis and related procedures. Includes occupational and needs analysis, competency identification, objective writing and information mapping. Integrates task analysis with a total system for developing and revising career and technical education curriculum or job training programs.

CTE- 337 Competency-Based Education: Career And Technical (2.00 cr.)

Repeatable: No

Competencies for career, technical and adult education programs and courses. Development of competency-based education performance indicators in all domains, a competency-based education management system, and basis for competency-based education evaluation.

CTE- 346 Seminar: Sustainable Concepts Infusion II (1.00 cr.)

Repeatable: No

Understanding and implementation of a sustainable culture. Development of implementation strategies for sustainable concepts infusion within instructional courses. Implementation and assessment of developed plans.

CTE- 346 Seminar: Aligning Career and Technical Education Curricula (2.00 cr.)

Repeatable: No

Current topics in career, technical, and adult education with application for personnel in the field. Aligning secondary and post-

secondary career and technical education curricula based on career pathways.

CTE- 346 Seminar: Sustainable Concepts Infusion I (1.00 cr.)

Repeatable: No

Understanding and implementation of a sustainable culture. Development of implementation strategies for sustainable concepts infusion within instructional courses. Implementation and assessment of developed plans.

CTE- 346 Seminar (1.00 - 3.00 cr.)

Repeatable: No

Current Topics in career, technical and adult education with application for personnel in the field.
Instructor's consent

CTE- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

International students majoring in Vocational, Technical and Adult Education will participate in an internship located in both industrial/business and vocational/technical institutions to have experience in their technical area.
Department consent

CTE- 359 Technology Impacts Occupational Programs (4.00 cr.)

Repeatable: Yes

Presentation of latest technology in communications, manufacturing, construction, and/or transportation which involve concepts from math, science and computer science.

CTE- 360 Coordination of Work-based Learning (WBL) Programs
(3.00 cr.)

Repeatable: No

Philosophy, planning, initiation, organization, coordination, evaluation, and teaching techniques of Cooperative Career and Technical Education (C-CTE) programs. Special emphasis on roles, responsibilities and duties of the cooperative teacher-coordinator.

CTE- 375 Workshop (1.00 - 3.00 cr.)

Repeatable: Yes

Special topics providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

CTE- 398 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

CTE- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

CTE- 405 Methods of Teaching Career and Technical Education
(2.00 - 3.00 cr.)

Repeatable: No

Competency-based and individualized approach to methods of teaching career and technical education.

Benchmark 1 is required for MBE, FCSE, and TECED students, who must enroll for 3 credits. No prerequisite for CTET students who enroll for 2 credits.

CTE- 408 Student Teaching In Career And Technical Education (4.00 - 8.00 cr.)

Repeatable: Yes

Directed teaching and community experiences at off-campus, postsecondary institutions.

Department consent

CTE- 438 Course Construction in Career and Technical Education (2.00 - 3.00 cr.)

Repeatable: No

Focus on curricula design principles and practices in Career and Technical Education (CTE). Content will challenge personally held ideas, assumptions, and practices related to curricula and its stakeholders. The products of learning include standards-based course, lesson, and assessment tools that are anchored to the mission, goals, and standards specific to the teacher-candidates' CTE program area.

Benchmark 1 is required for MBE, FCSE, and TECED students, who must enroll for 3 credits. No prerequisite for CTET students who enroll for 2 credits.

CTE- 440 Instructional Evaluation In Career and Technical Education (2.00 - 3.00 cr.)

Repeatable: No

Competency-based and individualized approach to instructional evaluation for career and technical educators.

Benchmark 1 is required for MBE, FCSE, and TECED students, who must enroll for 3 credits. No prerequisite for CTET students who enroll for 2 credits.

CTE- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

International students majoring in Vocational, Technical and Adult Education will participate in an internship located in both industrial/business and vocational/technical institutions to have experience in their technical area.

Department consent

CTE- 474 Adult Education (2.00 cr.)

Repeatable: No

Philosophy and history of adult education in the United States.

Techniques for teaching adults: psychological factors, methods, adult interests and characteristics.

CTE- 488 Career And Technical Education Internship (1.00 - 8.00 cr.)

Repeatable: No

Department consent

CTE- 498 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

CTE- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

DES – Design

DES- 114 Interior Design Communication Tools (3.00 cr.)

Repeatable: No

Introductory study of the design process, software and communication tools used within the interior design industry.

DES- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

DES- 150 Introduction to Sustainable Design and Development (3.00 cr.)

Contemporary Issues, Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Examination of theory and practice of sustainable development and the influential role of design.

DES- 176 Introduction to Digital Narrative (3.00 cr.)

Repeatable: No

Visual storytelling and time-based foundations (4D) for animation, digital cinema, comics, game design, transmedia design and other time-based forms. Emphasis on ideation through writing, storyboarding and concept illustration. Introduction to the field of entertainment design.

DES- 200 Design Concepts and Problems (3.00 cr.)

Repeatable: No

Comprehensive understanding of the processes, techniques, and concepts used by designers to arrive at innovative and successful design solutions.

Prerequisites: take ART-101 and ART-103, each with a grade of C or better

DES- 205 Design Drawing and Concept Visualization (3.00 cr.)

Repeatable: No

Comprehensive education and training in developing, visualizing, and communicating design ideas through drawing.

Prerequisites: take ART-200 with a grade of C or better

DES- 210 Letter Form Design (3.00 cr.)

Repeatable: No

Design of letterforms, figures, and visual symbols; history and development of type; calligraphy; page composition for various formats and audiences.

Prerequisites: take ART-100 and ART-101, each with a grade of C or better

DES- 214 Interior Design Practice, Materials and Finishes (3.00 cr.)

Repeatable: No

Introductory study of interior design professional practice, contemporary interior design issues, materials and finishes used within the built environment.

DES- 220 Introduction To 2D Digital Imaging (3.00 cr.)

Repeatable: No

Creative use of digital imaging technology in the visual arts; exploring the development of 2D imagery for both printed and electronic formats incorporating type, vector and raster graphics using layout and composition software.

Prerequisite: Take ART-101 with a grade of C or better

DES- 231 Industrial Design 1: Product Form and Visualization (3.00 cr.)

Repeatable: No

Introduction to Industrial Design, with an emphasis on aesthetics, visualization, and the process of designing new products.

Prerequisites: take DES-200 and DES-205, each with a grade of C or better

DES- 232 Industrial Design 2: Ergonomics (3.00 cr.)

Repeatable: No

Study and application of human factors to the design of products. Understand the human body and its limitations to create a product that is comfortable, safe, and easy to use.

Prerequisites: take DES-200 and DES-205, each with a grade of C or better

DES- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

DES- 256 Art Workshop (1.00 - 3.00 cr.)

Repeatable: Yes

Selected art concepts, processes and media will vary to serve special student populations. Credit determined by individual contract.

DES- 297 Design Field Experience/Experiential Learning (1.00 - 3.00 cr.)

Repeatable: No

Work in an approved design position or conduct advanced research on an approved design ic.

Department consent

DES- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

DES- 303 Interior Design Studio 1 (3.00 cr.)

Repeatable: No

Experiential study of the fundamental principles and elements of interior design and their application to a range of residential design projects. Projects emphasize residential space planning based on functional requirements, application of various elements of design, and design communication methods.

Prerequisites: take ART-103 (with a grade of C or better) or BURL-229; and take DES-205 (with a grade of C or better), AEC-131, and AEC-233

DES- 304 Interior Design II (3.00 cr.)

Repeatable: No

Design problems for interior spaces with emphasis on concepts, human interaction, and materials.

Prerequisites: take RD-205 or DES-303 with a grade of C or better

DES- 308 Lighting Design In The Built Environment (3.00 cr.)

Repeatable: No

Exploration and application of professional lighting design practice within the built environment including psychological and physiological aspects of artificial and natural light, effects of color, directional effects, materials, design process, aesthetics, codes, energy conservation, and sustainability.

Prerequisite: take DES-303 with a grade of C or better

DES- 310 Graphic Design I (3.00 cr.)

Repeatable: No

Exploration of the formal qualities of creating effective and informative design. Foundational design elements including line, shape, form and texture; compositional principle concepts of balance, contrast, grid structures and hierarchy.

Prerequisites: take ART-101 or DES-210, each with a grade of C or better

DES- 314 Interior Design Contracts and Codes (3.00 cr.)

Repeatable: No

Study of interior design professional practice, industry regulations and product specifications.

Prerequisites: Take DES-214

DES- 320 Furniture Design (3.00 cr.)

Repeatable: No

Design and construction of contemporary furniture.

Prerequisites: take DES-231 or DES-232 or DES-303 with a grade of C or better

DES- 321 Digital Imagery Studio (3.00 cr.)

Repeatable: Yes

A studio workshop experience in digital painting, photo illustration and image compositing using digital tools. Advanced topics and projects rotate.

Prerequisites: take ART-200, DES-205 & DES-220, each with a grade of C or better

DES- 325 Interactive Design I: Introduction to Web Design (3.00 cr.)

Repeatable: No

Design and development of web-based human-computer interfaces.

Prerequisites: take DES-220 with a grade of C or better

DES- 331 Industrial Design 3: Product Interface Design (3.00 cr.)

Repeatable: No

Designing products and their interfaces to make them understandable, easy to use, safe, and appealing.

Prerequisites: take DES-232 with a grade of C or better, and MFGT-110

DES- 332 Industrial Design 4: Design for Manufacture (3.00 cr.)

Repeatable: No

Overview of common materials and manufacturing techniques and application to the design of mass-produced products.

Prerequisites: take DES-231 and DES-232, each with a grade of C or better

DES- 333 Professional Practice In Industrial Design (1.00 cr.)

Repeatable: Yes

Overview of the role of the professional industrial designer.

Prerequisites: take DES-231 and DES-232, each with a grade of C or better

DES- 345 Product Form Design (3.00 cr.)

Repeatable: No

Exploration of product forms through drawing and model-building techniques.

DES- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

DES- 360 Graphic Design II (3.00 cr.)

Repeatable: No

Social responsibility, business and ethical factors affecting visual communication are investigated while deepening sensitivity and experience in graphic design. Deeper, broader understanding of how to create meaning and utilize problem-solving methodologies to develop work that is compelling, informative, and meaningful.

Prerequisites: take DES-310 and DES-220, each with a grade of C or better

DES- 370 Interactive Design II: Principles and Methods (3.00 cr.)

Repeatable: No

Application of principles and methods related to research, design, development, and evaluation of human-computer interfaces.

Prerequisite: take DES-325 with a grade of C or better

DES- 372 3D Modeling and Animation I (3.00 cr.)

Repeatable: No

Introduction to 3D digital modeling, animation, texturing, lighting, and rendering techniques. Using digital design elements and visual aesthetics, students create 3D digital imagery and animations.

Prerequisites: take ART-103 & DES-220, each with a grade of C or better

DES- 373 3D Modeling & Animation III (3.00 cr.)

Repeatable: Yes

Advanced studio course in which 3D digital expertise is developed through directed and collaborative research. Students specialize in one of the following 3D digital fields: modeling, animation, texturing, lighting and rendering, or visual effects. Repeatable: topics and projects rotate each semester.

Prerequisite: take DES-374 with a grade of C or better

DES- 374 3D Modeling and Animation II (3.00 cr.)

Repeatable: No

Intermediate focus on 3D digital modeling, animation, texturing, lighting, and rendering techniques. Create robust 3D digital imagery and animations using digital design elements and visual aesthetics.

Prerequisites: take DES-176 and DES-372, each with a grade of C or better

DES- 375 Digital Cinema Studio (3.00 cr.)

Repeatable: Yes

Techniques, topics and projects for digital cinema. Emphasis on creative direction, aesthetics, content and narrative development. Advanced students work individually and in teams to produce and critically examine self-directed projects. Advanced topics and projects rotate each semester.

Prerequisites: take DES-176, DES-220 and ART-100, each with a grade of C or better

DES- 378 Animation Studio (3.00 cr.)

Repeatable: Yes

Animation techniques, topics and projects. Course provides an introduction to 2D and s-motion animation techniques. Advanced students work individually and in teams to produce and critically examine self-directed projects. Specific topics and projects rotate each semester. Repeatable.

Prerequisites: take DES-176 and DES-220, each with a grade of C or better

DES- 379 Comics & Sequential Art Studio (3.00 cr.)

Repeatable: Yes

Techniques, topics and projects. Introduction to the art and craft of combining words and illustrated pictures to create narrative works. Advanced students work individually and in teams to produce and critically examine self-directed projects. Advanced topics and projects rotate each semester. Repeatable.

Prerequisites: take DES-176, DES-220 and ART-100, each with a grade of C or better

DES- 380 Signage And Exhibition Design (3.00 cr.)

Repeatable: Yes

Organization and design of environmental graphics through the production of signage, display, and exhibition support systems.

Prerequisites: take DES-205 and DES-360, each with a grade of C or better

DES- 382 Information Design (3.00 cr.)

Repeatable: No

Envisioning information through the design and production of charts, diagrams, maps, and other hierarchical graphics.

Prerequisite: take DES-360 with a grade of C or better

DES- 384 Advertising Design (3.00 cr.)

Repeatable: No

Graphic design principles and creative concepts as applied to advertising art.

Prerequisites: take DES-205 and DES-360, each with a grade of C or better

DES- 385 Interactive Digital Design III: Advanced Concepts (3.00 cr.)

Repeatable: No

Advanced design and development of human-computer interfaces.

Prerequisite: take DES-370 with a grade of C or better

DES- 386 Publication Design (3.00 cr.)

Repeatable: No

Graphic design principles as applied to the combination and coordination of art and typography with text.

Prerequisite: take DES-360 with a grade of C or better

DES- 388 Typographic Design (3.00 cr.)

Repeatable: No

Design of grid-based, hierarchical and expressive typographic structures; analysis of historical and theoretical precedents.

Prerequisite: take DES-360 with a grade of C or better

DES- 389 Typography In Motion (3.00 cr.)

Repeatable: No

Introduction into dynamic, time-based typography covering technology and skills involved in creating kinetic and emotive typography with various media.

Prerequisites: take DES-325 and DES-360, each with a grade of C or better

DES- 390 Entertainment Design Portfolio and Professional Practices Seminar (1.00 cr.)

Repeatable: No

Professional practices and portfolio seminar for Entertainment Design students, all concentrations. Develop of promotional materials and discuss related business strategies and legal issues.

Prerequisites: Take DES-176 and DES-220, and take either DES-375 or DES-378 or DES-379, each with a grade of C or better

DES- 397 Design Field Experience/Experiential Learning (1.00 - 3.00 cr.)

Repeatable: No

Work in an approved design position or conduct advanced research on an approved design ic.

Department consent

DES- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

DES- 405 Advanced Design Drawing (3.00 cr.)

Repeatable: No

In-depth study of illustration and presentation styles within various design contexts. Development of drawing skills in traditional and digital media, emphasizing perspective, form, and texture. Emphasis on rapid freehand, conceptual drawing as a means to imagine and develop design concepts.

DES- 410 Product And Packaging Graphics (3.00 cr.)

Repeatable: No

Design and application of graphics to products, packages, and related display systems.

Prerequisite: take DES-360 with a grade of C or better

DES- 414 Interior Design Construction Documentation (3.00 cr.)

Repeatable: No

Advanced interior design specification and construction documentation, incorporating elements of current professional practice.

Prerequisite: take DES-314 with a grade of C or better and ENGGR-234

DES- 415 Interior Design Studio 3 (3.00 cr.)

Repeatable: No

Advanced experiential study of the principles and elements of interior design and their application to a range of commercial design projects. Studio design projects emphasize conceptual development, space planning, building code and accessibility compliance.

Prerequisite: take DES-304 with a grade of C or better

DES- 416 Interior Design Senior Studio (4.00 cr.)

Repeatable: No

Exploration of advanced interior design ics, including sustainability, through an extensive project(s) to include all phases of current interior design professional practice and incorporation into students portfolio.

Prerequisites: take DES-308 and DES-414, each with a grade of C or better

DES- 431 ID5: Industrial Design Senior Studio I (3.00 cr.)

Repeatable: Yes

Exploration of advanced industrial design topics through extensive projects with consideration given to contextual and environmental issues. topics and projects rotate each semester.

Department consent

Prerequisite: take DES-331 and DES-332 with a grade of C or better

DES- 432 ID6: Industrial Design Senior Studio II (3.00 cr.)

Repeatable: No

Execution of advanced industrial design projects through all phases of current industrial design process.

Prerequisites: take DES-331 and DES-332, each with a grade of C or better

DES- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain

business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

DES- 451 Interior Design Practicum (3.00 cr.)

Repeatable: No

Work experience with an interior designer or in design-related field arranged with interior design work experience coordinator.

Department consent

Prerequisite: take DES-303 with a grade of C or better

DES- 456 Advanced Art Workshop (1.00 - 3.00 cr.)

Repeatable: Yes

Selected art concepts, processes and media will vary to serve special student populations. For students familiar with workshop approach or advanced in art program. Credit determined by individual contract.

DES- 480 Senior Project - Graphic Design (4.00 cr.)

Repeatable: No

Exploration of an advanced graphic design topic through an extensive project: research, production specification, and development of a presentation system.

Instructor's consent

Prerequisites: take DES-360, and take either DES-380 or DES-410, all with a grade of C or better

DES- 490 Senior Project: Entertainment Design (3.00 - 4.00 cr.)

Repeatable: Yes

Advanced entertainment design topic explored through the completion of professional level projects from concept to published media. Capstone project for the BFA in Entertainment Design.

Repeatable. Specific topics and projects rotate each semester.

Students are required to take a minimum of two consecutive semesters.

Instructor's consent

DES- 497 Design Field Experience/Experiential Learning (1.00 - 3.00 cr.)

Repeatable: No

Work in an approved design position or conduct advanced research on an approved design ic.

Department consent

DES- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ECE – Early Childhood Education

ECE- 100 Introduction To Early Childhood Programs (2.00 cr.)

Repeatable: No

Introduce early childhood profession. Early childhood programs for children birth through age eight; developmentally appropriate practice; current issues in early childhood; professionalism;

employability skills and attitudes; and career exploration. Decision making and appropriate planning of students' early childhood program plan.

Prerequisite: Early Childhood Education majors only

ECE- 105 Infant/Toddler Education (3.00 cr.)

Repeatable: No

Examine developmentally appropriate practice for educating infants and toddlers. Environment; instructional practices for individual and small group; lesson plans including assessment strategies, instructional technology techniques, and materials.

Take concurrently with HDFS-124

ECE- 149 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview.

Department consent

ECE- 200 Expressive Curriculum for the Young Child (3.00 cr.)

Repeatable: No

Curriculum, methods and materials related to music, art and creative movement activities for the young child.

ECE- 205 Preschool/Kindergarten Education (3.00 cr.)

Repeatable: No

Developmentally appropriate practice in preschool/kindergarten curriculum. Environment; instructional practices for individual, small and large group instruction; lesson plans including assessment strategies, instruction technology techniques, and materials.

ECE- 249 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview.

Instructor's consent

ECE- 264 Child Guidance in PreSchool - Kindergarten (2.00 cr.)

Repeatable: No

Essential elements in guiding children in early childhood classrooms. Positive guidance strategies, introduction to early childhood classroom management, effects of guidance on children's social and emotional development; methods in documenting children's behavior, progress, development.

Completion of Tier 1: HDFS-124 and ECE-105

ECE- 305 Primary Education (3.00 cr.)

Repeatable: No

Focus on developmentally appropriate teaching practices in primary classrooms (grades 1-3). Program models; learning environments; local, state, and national standards; assessment techniques; instructional approaches and lesson planning for primary students. Prerequisite: Completion of Tier 2 and Benchmark 1, and concurrent enrollment in ECE-313

ECE- 313 Language Arts And Emergent Reading: Birth-Kindergarten (3.00 cr.)

Repeatable: No

Methods and materials for planning, implementing, and evaluating language arts with children Birth-Kindergarten. Emphasis is on developing emergent literacy skills and language arts.

Prerequisite: Completion of Tier 2 and Benchmark 1, and concurrent enrollment in ECE-305

ECE- 411 Early Childhood Curriculum: Mathematics (3.00 cr.)

Repeatable: No

Mathematics curriculum planning for early childhood. Selection, organization, presentation, and evaluation of appropriate curricula.

Prerequisites: take ECE-421, ECE-435, and ECE-480

ECE- 412 Early Childhood Curriculum: Social Studies (3.00 cr.)

Repeatable: No

Methods and materials for assessing, planning, implementing and evaluating social studies curriculum for early childhood (birth-3rd grade).

Prerequisites: Benchmark I must be completed; take ECE-303, ECE-307 and ECE-309

ECE- 414 Early Childhood Clinical Experience: Integrated Curriculum (2.00 cr.)

Repeatable: No

Development of competencies in planning, teaching, and evaluating the integrated curriculum for the early childhood period.

Participation in an early childhood setting required.

Prerequisite: Benchmark I completion

ECE- 415 Early Childhood Curriculum: Science/Social Studies (4.00 cr.)

Repeatable: No

Methods and materials for assessing, planning, implementing, and evaluating early childhood social studies and science curriculum.

Prerequisites: take ECE-421, ECE-435, and ECE-480

ECE- 421 Administration Of Early Childhood Programs (2.00 cr.)

Repeatable: No

A study of program organization, program design, staffing, licensing, certification, equipment and facilities for operating early childhood education programs in a safe and healthy environment.

Completion of Tier 3: ECE-313 and ECE-305

ECE- 426 Classroom Management in the Primary Classroom (2.00 cr.)

Repeatable: No

Advanced study of managing early childhood classrooms.

Management of the physical environment, instructional context, including large and small groups, and social context; building a classroom community; encouraging collaborative learning; assessing management of early childhood classrooms; and analysis of classroom management programs. Microclinical in early childhood classrooms required.

Prerequisites: take ECE-421, ECE-435, and ECE-480

ECE- 427 Child Abuse And Neglect (2.00 cr.)

Repeatable: No

Systemic nature, forms and indicators, and prevention of abuse/neglect. Factors contributing to, and intervention skills in, coping with the effects of abuse/neglect on children and families at risk.

ECE- 433 Language Arts/Reading--Early Childhood Education (3.00 cr.)

Repeatable: No

Current philosophies, methodology and materials for teaching reading: readiness activities and beginning reading in early childhood.

ECE- 435 Children, Families, Schools And Communities (2.00 cr.)

Repeatable: No

Building family, school, and community partnerships to support the whole child. Demographics and sociological trends of modern families. Theories and processes used to establish positive and sustaining home-school-community relationships.

Completion of Tier 3: ECE-313 and ECE-305

ECE- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain experience.

Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ECE- 464 Special Topics In Early Childhood Curriculum (1.00 - 3.00 cr.)

Repeatable: Yes

Philosophy and methodology of early childhood education: problems confronting teachers.

ECE- 480 Pre-Student Teaching: Infant-Preschool (4.00 - 8.00 cr.)

Repeatable: No

Full-day, pre-student teaching placement for eight weeks. Age group includes infants or toddlers or preschoolers. Placement will include involvement with young children and parents. Teacher candidates will be supervised by faculty in the early childhood area. Placement will follow the school calendar.

Completion of Tier 3: ECE-313 and ECE-305

ECE- 480A Student Teaching In Preschool Programs (4.00 cr.)

Repeatable: No

Directed teaching and community experience in selected early childhood centers.

Department consent

ECE- 488 Intern Teaching (8.00 - 16.00 cr.)

Repeatable: No

An alternate method of obtaining student teaching experience.

Teacher interns receive license to teach and salaried appointments in cooperating school systems for one full semester.

Department consent

ECE- 492 Student Teaching In Prekindergarten (8.00 cr.)

Repeatable: No

Full-day student teaching experience at the prekindergarten level in a preschool setting, together with a weekly one-hour student teaching seminar session. The student teaching experience follows the calendar of the preschool.

Department consent

Prerequisites: Must be an Early Childhood Education major; take HDFS-335 and ECE-433

ECE- 493 Student Teaching: Kindergarten (4.00 - 8.00 cr.)

Repeatable: No

Full-day student teaching at the kindergarten level in a public school setting. Experience will follow the public school district calendar.

Department consent

Prerequisite: Professional Program Admission

ECE- 494 Student Teaching: Primary (4.00 - 8.00 cr.)

Repeatable: No

Full-day student teaching at the primary level (grades 1-3) in a public school setting. Primary student teaching experience follows the public school district calendar.

Department consent

Prerequisite: Professional Program Admission

ECE- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ECON – Economics**ECON- 199 Independent Study (1.00 - 3.00 cr.)**

Repeatable: Yes

Department consent

ECON- 201 General Economics (3.00 cr.)*Global Perspective, Social and Behavioral Sciences - Economics*

Repeatable: No

Introduction to basic elements of economics; analysis of institutions, issues and policy; theories of price, national income and employment. Not open to students taking ECON-210 and ECON-215.

Not open to students who took ECON-210 or ECON-215

ECON- 210 Principles Of Economics I (3.00 cr.)*Global Perspective, Social and Behavioral Sciences - Economics*

Repeatable: No

Tools of basic economic analysis including scarcity, cost, and demand and supply; macroeconomic issues such as economic growth, inflation, and unemployment; alternative macroeconomic theories; and fiscal and monetary policies. Not recommended for students who took ECON-201

ECON- 215 Principles Of Economics II (3.00 cr.)*Global Perspective, Social and Behavioral Sciences - Economics*

Repeatable: No

Theory of individual economic behavior; price determination;

market structures; labor, capital and natural resource markets; international economics; and current microeconomic ics.

Prerequisite: take ECON-210

ECON- 220 Economics of Crime (3.00 cr.)

Repeatable: No

Exploration of the contributions of economics to the understanding of crime and criminal justice. Use of market as a tool for analysis of crime and criminal behavior; economic burdens of criminality, evaluation of the costs imposed by criminal acts; efficiency in the allocation of criminal justice resources.

ECON- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ECON- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ECON- 335 Personal Investing (3.00 cr.)

Repeatable: No

Terminology, evaluation, selection and risk analysis of all types of investment vehicles: stocks, bonds, mutual funds, and enhanced traded funds.

Prerequisites: take either ECON-201 or ECON-210

ECON- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ECON- 350 Environmental And Natural Resource Economics (3.00 cr.)

Repeatable: No

Principles underlying use of natural resources including demand and supply; efficiency; cost effectiveness and benefit-cost analysis; sustainability; optimal pricing; and management of renewable and non-renewable resources. Principles are applied to the examination of pollution control, preservation versus development, recycling, and other environmental and natural resource issues and policies.

Prerequisites: take either ECON-201 or ECON-210

ECON- 360 Strategic Decision Making and Game Theory (3.00 cr.)
Contemporary Issues, Social Responsibility and Ethical Reasoning

Repeatable: No

Strategic behavior and game theoretic approaches for problem solving and social analysis with particular application to economics, politics, and sociology as well as business and industry applications; mechanisms for sustainable conflict resolution, ethical and socially

responsible decision making, and optimal individual and group choice.

ECON- 380 Business And Economic Forecasting (3.00 cr.)

Repeatable: No

Quantitative methods used in economics and business forecasting. topics include descriptive statistics, hypothesis testing, correlation, regression analysis and forecasting. Real business applications of these techniques are emphasized.

Prerequisites: take ECON-201 or ECON-215; and take STAT-130 or STAT-320

ECON- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ECON- 410 Microeconomics (3.00 cr.)

Repeatable: No

Value and distribution theory; analysis of demand- firm, industry and utility; pricing of production factors.

Prerequisite: take ECON-215

ECON- 415 Macroeconomics (3.00 cr.)

Repeatable: No

Determination of aggregate income, employment, growth rates and price levels; monetary and fiscal policies necessary for full employment.

Prerequisite: take ECON-215

ECON- 420 Labor Economics (3.00 cr.)

Repeatable: No

Basic labor theory; history of organized labor in western industrial societies; collective bargaining as viewed by labor, management, government and public; institutions involved in modern labor relations.

Prerequisites: take either ECON-201 or ECON-210

ECON- 421 Collective Bargaining & Labor Relations (2.00 cr.)

Repeatable: No

Introduction to collective bargaining in the U.S.; formation, substance and administration of a labor agreement, current labor law, role of National Labor Relations Board.

Prerequisites: take either ECON-201 or ECON-210

ECON- 425 Economic Development (3.00 cr.)

Global Perspective

Repeatable: No

Analysis of the economies of less developed countries in an institutional and international framework to understand the social and economic realities of people living in these regions. Evaluation of economic policies and their impact on development.

Prerequisite: take ECON-215

ECON- 435 Money, Banking, Financial Markets (3.00 cr.)

Repeatable: No

Money and bank credit, modern monetary theories, monetary policy.

Prerequisites: take either ECON-201 or ECON-210

ECON- 445 Public Finance (3.00 cr.)

Repeatable: No

Public finance at all governmental levels; taxation, expenditures, debt management and fiscal policy.

Prerequisites: take either ECON-201 or ECON-210

ECON- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ECON- 480 International Economics (3.00 cr.)

Global Perspective

Repeatable: No

Survey of current issues such as changing world financial situations, international agreements and organizations, and other topics related to trade models, tariffs, exchange rates and balance of payments.

Prerequisite: take ECON-210

ECON- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

EDUC – Education

EDUC- 10 Praxis I: Pre-Professional Skills Test Writing Preparation (1.00 cr.)

Repeatable: Yes

Designed to prepare education students for the PPST:Writing test. Structured writing format and learning strategies to develop an organized and authoritative approach to professional writing.

EDUC- 11 Praxis I: Reading Comprehension (1.00 cr.)

Repeatable: Yes

Utilization of a structured reading comprehension format and metacognitive learning strategies to improve the reading comprehension skills needed by education students. Study of specific reading comprehension elements assessed in the standardized test that all pre-service teachers are expected to pass.

EDUC- 170 Video Games and Simulations in Educational Environments (2.00 cr.)

Repeatable: No

Philosophical, theoretical, design and implementation issues relative to incorporating games and simulations within educational and training environments. Emphasis will be placed on education environments.

EDUC- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

EDUC- 210 Impacts of Technology on Learning (3.00 cr.)

Contemporary Issues

Repeatable: No

The impacts of technology on individual learners and society; the role technology plays in both the information and formal education of individuals; contemporary developments and issues related to the use of technology in individual and collective learning scenarios.

EDUC- 260 Images of Education: Not Another Brick in the Wall (3.00 cr.)

Contemporary Issues

Repeatable: No

A multidisciplinary approach to the experience of becoming educated; an opportunity to understand education from a critical reading of historical, philosophical, literary and cinematic explorations about school and schooling.

EDUC- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

EDUC- 303 Educational Psychology (3.00 cr.)

Repeatable: No

Psychological aspects of learning, teaching, and assessment processes within educational contexts. Focus on the principles of learning and cognition, human development, individual and group differences, teaching and assessment processes.
Must be Sophomore level or higher

EDUC- 304 Secondary Curriculum Methods and Assessment (2.00 cr.)

Repeatable: No

Discipline-specific curriculum, methods, and assessment procedures for teaching content minors.

Department consent

Prerequisite: Benchmark I completion

EDUC- 305 Student Teaching (2.00 - 16.00 cr.)

Repeatable: No

Directed teaching in school setting in subject area consistent with teaching minor or add-on certification. Completion of teacher work sample and portfolio.

Department consent

Prerequisite: Benchmark II completion

EDUC- 307 Racial and Cultural Perspectives on Applied Human Relations (3.00 cr.)

Racial & Ethnic Studies Category B

Repeatable: No

Major themes on how race and ethnicity shape personal and interpersonal relationships.

EDUC- 309 Methods, Materials, and Management for Middle Childhood Education (3.00 cr.)

Repeatable: No

Focus on developmentally appropriate teaching practices in elementary classrooms (grades 4-6). Program models; learning environments; local, state, and national standards; assessment techniques; instructional approaches, and lesson planning for elementary students.

Benchmark I Completed

EDUC- 310 Middle Childhood: Curriculum and Methods for Teaching Science (2.00 cr.)

Repeatable: No

Curriculum, methods, and assessment in middle childhood science teaching for children ages 9 through 11. Knowledge and performances in the areas of planning, classroom management, instruction, and professional responsibilities for reflection, communication are the focus.

Benchmark I Completed

EDUC- 311 Middle Childhood: Curriculum and Methods for Teaching Math (2.00 cr.)

Repeatable: No

Methods and materials for assessing, planning, implementing and evaluating mathematics curricula for elementary classrooms (grades 4-6). emphasis is placed on: 1) utilizing process skills, 2) fostering content knowledge in the mathematical areas, 3) assessment, 4) mathematical content instruction, and 5) building positive attitudes for the mathematical classroom. Students will continue to develop skills in the classroom environment while maintaining professional responsibilities for teaching at the elementary level.

Prerequisite: Benchmark I completion

EDUC- 312 Middle Childhood: Curriculum and Methods for Social Studies (2.00 cr.)

Repeatable: No

Methods and materials for assessing, planning, implementing and evaluating social studies curricula for elementary classrooms (grades 4-6). emphasis is placed on: 1) utilizing development skills, 2) fostering content knowledge in the content of social studies, 3) assessment, 4) social studies content instruction, and 5) building positive attitudes for the teaching of social studies in the classroom. Develop skills in the classroom environment and maintain professional responsibilities for teaching at the elementary level.

Prerequisite: Benchmark I completion

EDUC- 314 Student Teaching in Elementary Grades (4.00 - 8.00 cr.)

Repeatable: No

Full-day student teaching at the elementary level (grades 4-6) in a public school setting. Middle childhood student teaching experience follows the public school district calendar.

Department consent

Prerequisite: Benchmark II completion

EDUC- 320 Racism and Colonialism: Impact on Communities and Education (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category A, Global

Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Study of systemic hegemony as race, ethnicity, gender, and social class, with a focus on education, language and literature practices, and communities in the United States, Europe, and the societies they colonized. Critical and creative learning experience to evaluate the impact of colonialism, neo-colonialism, and empire on schools and communities.

EDUC- 326 Foundations Of Education (2.00 cr.)

Repeatable: No

The study of education and schooling through philosophical, historical, sociological and curricular contexts.

EDUC- 330 Multiculturalism: Dialogue and Field Experience (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category A, Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Intensive examination of multiculturalism in the U.S. and global schools and communities: the educational and cultural needs of diverse social groups, discussion of hegemony, cultural, racial, socioeconomic, political, gender, LGBT, and language barriers to equal educational and economic opportunity. Field experience. Strategies for educational and socioeconomic equity. Prerequisite: Background check required.

EDUC- 336 Multiculturalism: Issues & Perspectives (2.00 cr.)
Racial & Ethnic Studies Category A

Repeatable: No

Intensive study of diversity in U.S. schools. Examination of the educational needs of students from various ethnic, cultural, religious, language and social class groups. Discussion of issues related to racism, sexism and oppression.

EDUC- 349 Methods of Teaching Middle School Math (3.00 cr.)

Repeatable: No

Research, issues and problems related to current reform in teaching middle school mathematics, including planning curriculum, assessing student learning, managing instruction, and providing for individual needs.

EDUC- 376 Cross-Cultural Field Experience (1.00 cr.)

Repeatable: No

Supervised field experience in an educational setting with diverse learners to increase awareness, understanding, sensitivity, and appreciation for ethnic and cultural diversity. The acquisition of knowledge, skills, and professional dispositions necessary for educators to facilitate learning for all students are emphasized. Benchmark I Completed

EDUC- 380 Reading And Language Arts In Elementary Education (3.00 cr.)

Repeatable: No

Current philosophies in reading and language arts education, the centrality of language arts to the elementary curriculum and methodologies for the elementary classroom.

Benchmark I Completed

EDUC- 381 Preclinical: Elementary Ed Language Arts And Reading (1.00 cr.)

Repeatable: No

Supervised teaching experience in developing the prospective teacher's ability in elementary education language arts and reading skills.

Benchmark I Completed

EDUC- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

EDUC- 400 Workshop: Special Topics In Education (1.00 - 3.00 cr.)

Repeatable: Yes

Current specialized topics studied through experimental activities.

EDUC- 401 Global Education Practicum (3.00 cr.)

Global Perspective

Repeatable: No

Experiential learning opportunity to provide student with in-depth study of one or more of the global education sub-groups: human rights and social justice, human commonality and diversity, population demographics, planet management, global belief systems, economic systems, conflict and control, political systems, science and technology and/or sustainable development.

EDUC- 402 Global Perspectives For Educators (3.00 cr.)

Global Perspective

Repeatable: No

Strategies for infusing global perspectives into the classroom for those working in globalized organizations. Methodology, materials and instructional strategies necessary for effective implementation of global education in schools and individual classrooms as well as within global organizations. Topics/issues related to globalization to develop a foundation from which teachers and other leaders in organizations can draw ideas for their specific needs.

EDUC- 403 Educational Psychology Of The Adult Learner (2.00 cr.)

Repeatable: No

Psychological principles and theoretical framework guiding the educational process for adult learners. Special focus on planning and evaluating instruction while utilizing active learning to build strong learning communities.

EDUC- 415 Classroom Management (2.00 - 3.00 cr.)

Repeatable: No

Technique and theory for motivating PreK-grade 12 age students to manage their own behaviors, including preventive discipline, behavior management, classroom environment, classroom climate, effective communication, conflict resolution, and peer mediation. Must be taken concurrently with variety of field experiences. Benchmark I Completed

EDUC- 416 Conflict Resolution And Crisis Management For Educators (2.00 cr.)

Repeatable: No

Conflict mediation and crisis intervention strategies in school settings.

EDUC- 423 Service Learning and Civic Engagement (1.00 - 3.00 cr.)

Global Perspective

Repeatable: No

Civic engagement and service to others in partnership with community agencies. Interpersonal communications and relationship skills; service to under-served and underrepresented populations; social justice; service provider role in civic engagement.

EDUC- 440 Poverty in the Schools (2.00 cr.)

Repeatable: No

Characteristics and issues facing students from economically disadvantaged backgrounds. Traits of high-performing, high-poverty schools with emphasis on strategies to reduce the achievement gap and build community partnerships. Intended for teachers in the field.

EDUC- 441 Mobile Learning Instructional Design (3.00 cr.)

Repeatable: No

Mobile learning research, trends, instructional design strategies for curriculum integration and professional development.

EDUC- 442 Teaching Digital Media Literacy in the Content Areas (2.00 cr.)

Repeatable: No

Research-based strategies for analyzing, critiquing and engaging with digital text, video, images and diverse multimedia primary sources in the PK-12 classroom to stimulate inquiry, creativity and critical thinking.

EDUC- 443 Differentiated Instruction (3.00 cr.)

Repeatable: No

Research-based instructional methods to meet the varied needs of all learners in today's classrooms, including English language learners, students with a variety of learning styles and abilities and interests. Alternative assessment methods and strategies to manage a differentiated instructional setting.

EDUC- 445 School-wide Positive Behavioral and Intervention Support (3.00 cr.)

Repeatable: No

Principles of school-wide positive behavioral interventions and supports (PBIS). Roles and functions of the PBIS team, action planning for sustainable practices, data collection systems and tools, and data analysis for planning three-level interventions and monitoring progress.

EDUC- 446 Using Games for Learning and Assessment (1.00 cr.)

Repeatable: No

Integration of interactive games and simulations with the curriculum, implications for effective assessment. Use of games to support collaboration, problem solving, decision making, and to

increase motivation and engagement in the classroom, including benefits and drawbacks.

EDUC- 447 Teaching Students with Autism in the Inclusive Classroom (3.00 cr.)

Repeatable: No

Strategies to address the varied social and academic needs of students with Autism Spectrum Disorders in the inclusive classroom; functional behavior assessment and behavior intervention plans, educational interventions, and technology considerations.

EDUC- 448 Math Assessment for Response to Intervention (2.00 cr.)

Repeatable: No

Principles of using universal screeners and curriculum-based measures (CBMs) to assess student performance in mathematics. Use of assessment tools in mathematics to identify learning problems, to monitor student growth, and implement Response to Intervention (RTI) practices.

EDUC- 450 Integrating Social Media Instructional Strategies (1.00 cr.)

Repeatable: No

Social media instructional strategies for professional development, global collaborative initiatives, learning-community development and collaborations. Digital citizenship and learning outcomes and assessment using social media.

EDUC- 451 Project-based Learning in the Flipped Classroom (2.00 cr.)

Repeatable: No

Instructional strategies for design, management, and assessment of standards-focused, project-based learning (PBL) in the flipped classroom. Use of multimedia and online resources to support collaboration and increase learner motivation and engagement.

EDUC- 452 Universal Design for Learning (2.00 cr.)

Repeatable: No

Instructional design strategies that support a wide range of learner differences; create barrier-free learning by applying universal design concepts.

EDUC- 453 Middle School Through Adult 6-Traits Writing Instruction (3.00 cr.)

Repeatable: No

Concepts, instructional methods and assessment strategies for improving writing instruction, middle school through post-secondary. Self-assessment strategies, application of 6-traits, technology and software applications, and writing across the curriculum.

EDUC- 454 PK Through Elementary 6-Traits Writing Instruction (3.00 cr.)

Repeatable: No

Application of the 6-Traits theory to assessment and instruction of student writing in PK through grade 4. Study of the continuum of primary and elementary language arts skills and writing across the curriculum.

EDUC- 455 Strategies for Dealing with Disruptive Behavior (3.00 cr.)

Repeatable: No

Evidence-based preventive strategies, effective interventions, and classroom management strategies for addressing problem behaviors, chronic noncompliance and intermittent disruptive conduct.

EDUC- 456 Bullying in Schools (2.00 cr.)

Repeatable: No

Issues, educational interventions and instructional strategies for creating a safe learning environment to break the cycle of bullying and cyberbullying.

EDUC- 457 Effective Classroom Management (2.00 cr.)

Repeatable: No

Research-based strategies for effective management of the K-12 classroom including organization of time, physical space, curriculum, instruction, and assessment to minimize and prevent classroom management problems and create a classroom culture that supports cooperative learning.

EDUC- 458 Issues in STEM Education (3.00 cr.)

Repeatable: No

Issues related to science, technology, engineering and mathematics (STEM) education; research-based instructional strategies for engaging diverse learners, and career pathways in STEM-related fields.

EDUC- 495 Personal Learning Experience (2.00 cr.)

Repeatable: No

An experimental program for juniors and seniors. By permission of program directors. Each student selects an area of life which involves ethical decision and investigates that decision-making process. The group enrolled for this experience meets with the directors twice a week for direction, discussion, and criticism. Self-evaluation paper at the close of the course, which is submitted to the critique of the directors and other members of the learning experience.

EDUC- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ELEC – Electricity/Electronics**ELEC- 149 Cooperative Education Experience (1.00 - 8.00 cr.)**

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ELEC- 204 Electricity/Electronics Fundamentals (3.00 cr.)

Repeatable: No

Electricity/electronics, associated phenomena related to basic

electrical and electronics systems. Examines devices, operation, application, theory from power devices to electronic devices, controls to microprocessors.

Math Placement or MATH-120

ELEC- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ELEC- 260 Electrical Circuits (3.00 cr.)

Repeatable: No

Concepts and analysis techniques in DC and AC circuit analysis including current, voltage, resistance, capacitance, inductance, impedance, loop and node equations, transients, network theorems, real, reactive and apparent power in AC circuits.

Prerequisites: take PHYS-211 and MATH-153, or take PHYS-241

ELEC- 271 Digital Logic And Switching (3.00 cr.)

Repeatable: No

Analysis and synthesis of combinational and sequential switching circuits. Boolean algebra and number systems, switching functions, minimization, single and multiple output networks, realization of functions, programmable logic devices. Finite state sequential machines, state transition diagrams, machines and state equivalence. Algorithmic state machines and asynchronous state machines.

Prerequisite: take either ELEC-204 or ELEC-260

ELEC- 272 Solid State Electronics (3.00 cr.)

Repeatable: No

Basic semiconductor theory dealing with signals, operational amplifiers, diodes, bipolar junction and field effect transistor, frequency response, feedback, and circuit analysis.

ELEC- 274 Fundamentals Of Microprocessors And Microcomputer Systems (3.00 cr.)

Repeatable: No

Concepts of microprocessors, microcomputer architecture, assembly language programming and peripheral components. Hardware topics include 80 x 86 processors, interrupts, bios, serial and parallel interfaces, video displays, hard drives, CD roms, memory devices and local and peripheral buses.

Prerequisites: take ELEC-271 and CS-144

ELEC- 290 Circuits And Devices (4.00 cr.)

Repeatable: No

Electrical and electronic circuits and devices. Analysis of circuits containing passive and active components. Analog and digital circuitry including amplifiers and logic gates. Power calculations in alternating current circuits. Electro-mechanical energy conversion including DC and AC machinery. Lab activities include use of base test equipment and the construction of simple electronic circuits.

Prerequisites: take MATH-154 and PHYS-282

ELEC- 303 Electronics Circuits, Devices And Applications (3.00 cr.)

Repeatable: No

Concepts and analysis techniques in DC and AC circuit analysis, basic electronics theory, devices, logic and systems, including capacitance, inductance, impedance, circuit equations, network theorems, signals, op-amps, transistors, and circuit analysis. Number systems, combinational logic, minimization, programmable logic devices, state machine algorithms, transition diagrams, asynchronous and synchronous sequential logic.

Prerequisites: take MATH-153 and PHYS-242

ELEC- 310 Biomedical Instrumentation (3.00 cr.)

Repeatable: No

Review of basic electronics; measurements of physical, chemical, biological, and physiological variables; safety, noise, isolation, grounding, and shielding in biomedical instrumentation; circulatory, nervous, respiratory systems and related instrumentation; introduction to clinical lab systems; introduction to medical imaging systems.

Prerequisite: take ELEC-204

ELEC- 340 Motors And Generators (2.00 cr.)

Repeatable: No

Practical approach to basic operating theory, construction, maintenance of generators, motors, transformers, and machine control.

Prerequisite: take ELEC-204

ELEC- 341 Electrical And Mechanical Interface Devices (3.00 cr.)

Repeatable: No

Introduction to control system technology of discrete processes with emphasis on the devices that interface between electrical and mechanical systems. Theory and applications of sensors, actuators, schematics, state charts, ladder diagrams, programmable logic controllers, and PC based data acquisition and control.

Prerequisites: take either ELEC-204 or ELEC-260; and take PHYS-241 and POWER-260

ELEC- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ELEC- 382 Electronic Communications (4.00 cr.)

Repeatable: No

Electrical/electronic communication systems, modulation, demodulation, R.F. and I.F. amplifiers, alignment, antennas, composite TV signal, receivers, transmitters, spectral representation of signals, amplitude modulation, AM/FM transmitters, side band transmission, AM/FM receivers, and frequency modulation.

Prerequisite: take ELEC-204

ELEC- 395 Seminar (1.00 - 2.00 cr.)

Repeatable: Yes

Specific content is designed to upgrade competencies of participants. Content will change to reflect current state of the art in electricity/electronics or power mechanics.

ELEC- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

ELEC- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ELEC- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ENGGR – Engineering Graphics**ENGGR- 112 Engineering Graphics Fundamentals (3.00 cr.)**

Repeatable: No

Fundamentals of engineering graphics: principles, standards and graphic language necessary to communicate technical information on industrial drawings. Includes appropriate software, visualization, geometric concepts and dimensioning basics.

ENGGR- 134 Computer Assisted Design and Building Modeling Fundamentals (3.00 cr.)

Repeatable: No

Tools, concepts and strategies to create digital 2D and 3D project views essential to the building industry. Including Computer Assisted Design(CAD) and Building Information Modeling (BIM) programs that are current industry standard.

ENGGR- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ENGGR- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ENGGR- 210 Engineering Graphics Using Solid Modeling (3.00 cr.)

Repeatable: No

Engineering graphics principles and standards, development of effective technical communication skills between design, engineering, and manufacturing disciplines. Project planning, solid modeling, assembly composition and drafting techniques to support and solve engineering and design problems.

Prerequisite: take ENGGR-112

ENGGR- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ENGGR- 266 Engineering Graphics Surface Modeling & Rendering (3.00 cr.)

Repeatable: No

Development of three-dimensional surface models and rendered images. Organic surface modeling to create models with complex curved surfaces. Rendered images to communicate model concepts.

Prerequisite: take ENGGR-112

ENGGR- 280 Engineering Graphics Applications (3.00 cr.)

Repeatable: No

Contemporary software and hardware used to produce solutions for engineering design problems. Topics include comprehensive graphic standards and implementation, advanced methods of producing engineering graphics, tools for improving design efficiency, and alternative communication technologies.

Prerequisite: Take ENGGR-210

ENGGR- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ENGGR- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ENGGR- 395 Seminar (1.00 - 2.00 cr.)

Repeatable: Yes

(Title will reflect specific design, research and development content). Current and projected communication methods, concepts, technologies and innovations in design, research and development.

ENGGR- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ENGGR- 400 Workshop: (1.00 - 3.00 cr.)

Repeatable: Yes

Special Topics in design, research and development, providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

ENGGR- 436 Computer Assisted Design Problems (3.00 cr.)

Repeatable: No

Advanced CADD applications. Construct three dimensional

wireframe drawings. Perform finite element analysis on select components. Customize software for specific applications. Customize software for specific applications. In-depth analysis of CADD applications in mechanical and architectural design.

Prerequisites: take ENGGR-112 or CADD-234

ENGGR- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ENGGR- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ENGL – English (also see LIT)**ENGL- LIT Literature classes are listed separately, under LIT (0 cr.)**

Repeatable: No

Literature classes are listed separately, under LIT

Department consent

ENGL- 80 Reading, Writing, and Grammar (6.00 cr.)

Repeatable: No

Basic reading, writing and grammar skills in English. Credits earned will not count toward graduation. (ENGL-80 is the same as ESL-51A and ESL-51B.)

ENGL- 90 Writing Workshop (3.00 cr.)

Repeatable: No

Developmental composition course required of students who score below the designated cut-off on the Wisconsin English Placement Test for admission into ENGL-101. Prepared students for ENGL-101 and the rigors of college writing. Grade of "C" or better required to move on to ENGL-101. Course does not count toward graduation but is included in the student's course load, fees, and grade point average.

ENGL- 101 Composition 1 (3.00 cr.)***Communication Skills - Writing***

Repeatable: No

Introductory, first-semester composition course required of students who achieve a designated score on the Wisconsin English Placement Test or a score of "C" or better in ENGL-090. Practice in college-level writing, critical thinking and reading. Introduction to academic research, source-supported writing, argumentation, and conventions of structure, style, grammar, mechanics, and format appropriate to specific rhetorical situations. Students must receive a "C-" or better in ENGL-101 to move on to ENGL-102.

English Placement Required

ENGL- 102 Composition 2 (3.00 cr.)***Communication Skills - Reading***

Repeatable: No

Second-semester composition course required of students who receive a grade of "C-" or higher in ENGL-101. Continued development, through advanced academic research and inquiry, of the rhetorical and critical reading, writing, and thinking skills acquired in ENGL-101. Focus on synthesizing a variety of readings and texts, including imaginative literature. Further refinement of documentation skills and academic writing practices and conventions.

Prerequisite: C- or better in either ENGL-101 or ENGL-111

ENGL- 111 Freshman English--Honors I (3.00 cr.)

Communication Skills - Writing

Repeatable: No

Readings in world literature and related writing for training in composition techniques; documented paper.

ENGL-111 Placement

ENGL- 112 Freshman English--Honors II (3.00 cr.)

Communication Skills - Reading

Repeatable: No

Continuation of ENGL-111.

Prerequisite: take either ENGL-101 or ENGL-111

ENGL- 113 Honors Seminar I (3.00 cr.)

Repeatable: No

Intensive reading and writing that examines topics in world literature from Shakespeare to the present.

Department consent

Prerequisite: take either ENGL-101 or ENGL-111

ENGL- 121 Introduction to Professional Communication (3.00 cr.)

Repeatable: No

Trends, opportunities, and technologies shaping the field of professional communication. Career paths and specializations as well as ethical responsibilities.

Prerequisite: Professional Communication & Emerging Media majors only

ENGL- 125 Professional Writing Elements Of Style (3.00 cr.)

Repeatable: No

Develop stylistic fluency through study of interaction of rhetoric, style, and grammar. May not be substituted for any required English composition course.

Prerequisite: take either ENGL-101 or ENGL-111

ENGL- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ENGL- 207 Writing For The Media (3.00 cr.)

Repeatable: No

Theory and practice of writing for the media.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 210 Journalism Practicum (1.00 cr.)

Repeatable: Yes

Work on regularly published newspaper and submit articles for evaluation and publication.

Department consent

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 215 Foundations of Technical Communication (3.00 cr.)

Repeatable: No

Overview of major writing and documentation forms and conventions used in technical communication, including document design strategies, technical reports, and other professional texts.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 218 Mass Communication: Effects Of The Technology On Society (3.00 cr.)

Technology

Repeatable: No

The ideological and social implications of mass communication technology.

Prerequisite: take either ENGL-101 or ENGL-111

ENGL- 225 Editing Processes And Practices (3.00 cr.)

Repeatable: No

Comprehensive editing, copy editing, proofreading, and style selection; review of Standard Written English grammar and usage.

Prerequisites: take ENGL-102 or ENGL-112 or ENGL-113; and take ENGL-125

ENGL- 245 Creative Writing (3.00 cr.)

Creative Arts, Social Responsibility and Ethical Reasoning

Repeatable: Yes

Introduction to creative writing with an ethics component in four genres: Poetry, fiction, drama, and creative nonfiction.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 247 Critical Writing (3.00 cr.)

Communication Skills - Writing

Repeatable: No

The art of evaluation and judgment; writing critical reviews and articles; documented critical paper.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ENGL- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ENGL- 312 Transnational Professional Communication (3.00 cr.)

Repeatable: No

Theories and practical approaches to the global aspects of professional communication, including translation and cross-cultural visual communication. Apply cultural models in order to understand and address the needs of users and colleagues from different cultural and linguistic backgrounds.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 317 Topics In Journalism (1.00 - 3.00 cr.)

Repeatable: No

Intensive study of and practice in topics in journalism.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 320 Business Writing (3.00 cr.)

Repeatable: No

Written communication in business: practice in writing memos, letters, electronic correspondence, reports and other practical communication.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 330 Feature Writing (3.00 cr.)

Repeatable: No

Plan, research and create feature articles for newspapers, magazines and online publications; develop research tools and writing skills; observe ethical and legal considerations in writing.

Prerequisite: take ENGL-207

ENGL- 335 Critical Approach to Digital Humanities (3.00 cr.)

Repeatable: No

Explores the rhetoric of technologies and the dynamic interaction between digital technologies and society.

ENGL- 340 The Structure Of English (3.00 cr.)

Repeatable: No

New analytic and descriptive methods applied to modern English.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 342 Creative Writing II (3.00 cr.)

Repeatable: No

Advanced practice in creative writing that builds on skills taught in ENGL-245 Creative Writing, focusing on genre specific texts.

Prerequisite: take ENGL-245

ENGL- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ENGL- 350 Digital Storytelling (3.00 cr.)

Repeatable: No

Create and critique visual and digital stories and the deployment of digital and visual media tools to tell a variety of stories from diverse social and cultural contexts.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 361 Hypertext Writing (3.00 cr.)

Repeatable: No

Investigate writer and audience interaction in a hypertext environment. Gain exposure to and utilize markup languages to maximize audience participation in websites and other hypertext documents. Research, production and testing of an original website and hypertext essays.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 371 Rhetoric and Style: Strategies of Argumentation (3.00 cr.)

Repeatable: No

Examines classical rhetoric to identify enduring elements and concerns as well as critical tensions and conflicts. Students will obtain the vocabulary and conceptual understanding of the rhetorical tradition with attention to development both oral and written arguments.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 385 Document Design (3.00 cr.)

Repeatable: No

Approaches to transmitting information in print and screen documents through the application of rhetorical and design principles.

ENGL- 388 Writing for the Internet (3.00 cr.)

Repeatable: No

Investigate writer and audience interaction in hypertext and multimedia environments, and gain exposure to an utilize markup languages to maximize audience participation. Research, produce, and test an original hypertext or multimedia artifact.

ENGL- 396 Mass Media History (3.00 cr.)

Repeatable: No

Highlights of the origins, growth and evolution of America's mass media from their early Western European background to the diversity of the modern day.

ENGL- 396 Expository Writing (Travel Writing in Scotland) (3.00 cr.)
Global Perspective

Repeatable: No

Forms, strategies and styles of expository writing. Emphasis on travel writing in Scotland, appropriate style and mechanics for presenting travel writing.

ENGL- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ENGL- 407 Seminar in Applied Journalism (3.00 cr.)

Repeatable: No

Investigation into journalistic practices in particular disciplines, industries, and trades. Students will research, synthesize, and apply journalistic practices to their chosen field.

Prerequisite: take ENGL-207

ENGL- 410 Scientific Communication (3.00 cr.)

Repeatable: No

Written and oral communication strategies for scientific careers, including the creation of data displays, proposals, and technical reports to articulate research methodologies and disseminate findings for broad audiences.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 415 Technical Writing (3.00 cr.)

Repeatable: No

On-the-job writing for business and industry; reports, letters and other documents.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 418 Convergent Communication (3.00 cr.)

Repeatable: No

Defining and analyzing convergent medial practices in professional communication disciplines, industries and trades; exploring how convergence of print, video/audio and online media has influenced professional writing.

Prerequisite: take ENGL-218

ENGL- 425 Usability Design And Testing (3.00 cr.)

Repeatable: No

Plan, design, and conduct tests, measure effectiveness and efficiency of written and online documents; examine methodology and application of usability testing to demonstrate its value and importance.

Prerequisite: take ENGL-415

ENGL- 430 Writing For Content Management (3.00 cr.)

Repeatable: No

Concepts and practices of content management systems for the creation and production of technical communication both in print and online. Includes document workflow, globalization and translation of content for assembly of relevant documents. Uses case studies and client-based projects.

Prerequisite: take either ENGL-215 or ENGL-415

ENGL- 435 Writing Technical Manuals (3.00 cr.)

Repeatable: No

Production of a technical manual--planning procedure, collecting information, analyzing audience, writing and field testing.

Prerequisite: take either ENGL-215 or ENGL-415

ENGL- 437 Technical Writing Practicum (1.00 - 3.00 cr.)

Repeatable: Yes

Plan, write and produce a technical document for a client. Principles of document design, clear writing for a specific audience, methods of determining client needs, and methods of producing the final

document.

Department consent

ENGL- 440 Writer At Work Seminar (2.00 cr.)

Repeatable: No

Introduction to and practice in the professional side of creative writing, including but not limited to publication, reading, writers conferences and grant writing.

Instructor's consent

Prerequisite: take ENGL-342

ENGL- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ENGL- 471 Professional Communication Capstone (3.00 cr.)

Repeatable: No

Preparing to enter the job market in a professional communication field, both as a full-time employee and as a freelancer or consultant. Practical issues such as networking, self-employment, copyright and portfolio development. Production of a significant client-based capstone project.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

ENGL- 480 Seminar in Digital Humanities (3.00 cr.)

Repeatable: No

Research into and discussion of current and emerging issues in the digital humanities. Subject matter covered will vary to reflect the state of current research.

Prerequisite: Take ENGL-335

ENGL- 495 Digital Humanities Capstone (3.00 cr.)

Repeatable: Yes

Development of student-initiated research project in the digital humanities over two semesters. Results in thesis in medium appropriate to topic.

Prerequisite: Take ENGL-335

ENGL- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ENSC – Environmental Science**ENSC- 101 Environmental Science Profession (1.00 cr.)**

Repeatable: No

A survey of the Environmental Science program and academic support services to advance students' career goals. Research, leadership, internship, service learning, and other important career enhancing experiences will be explored. Participation in inclusive excellence activities will expose students to issues that are relevant in an increasingly culturally diverse work environment.

ENSC- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ENSC- 398 Field Experience in Environmental Science (1.00 - 6.00 cr.)

Repeatable: No

A field experience in environmental science in an approved position consisting of a minimum of 320 hours of work experience. Student learning objectives, employer evaluations, student evaluation, interim reports, and a final written report and oral presentation are required.

Department consent

ENSC- 425 Environmental Science and Sustainability Capstone (3.00 cr.)

Repeatable: No

Sustainable solutions to real-world problems will be developed through partnerships with private, public, and/or industrial sectors of society. Projects will be taken from the ideation phase to the completion of the required final documentation. The design of a triple-bottom-line solution will be emphasized.

Prerequisite: BIO-350 and Senior standing

ENSC- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ESLI – English as a Second Language Institute

ESLI- 10A Beginning ESL Listening and Speaking Skills I (3.00 cr.)

Repeatable: No

Developing basic listening and speaking skills for English as a Second Language learners. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 10B Beginning ESL Listening and Speaking Skills II (3.00 cr.)

Repeatable: No

Further developing and reinforcing basic listening and speaking skills for English as a Second Language learners. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 11A Beginning ESL Reading, Writing, and Grammar Skills I (3.00 cr.)

Repeatable: No

Developing basic reading and writing skills for English as a Second Language learners. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 11B Beginning ESL Reading, Writing and Grammar Skills II (3.00 cr.)

Repeatable: No

Further developing and reinforcing basic reading and writing skills for English as a Second Language learners. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 12A Fluency Development I (3.00 cr.)

Repeatable: No

Developing fluency in listening and reading comprehension of authentic English materials, and in production of oral fluency, through a variety of realistic communicative tasks.

ESLI- 12B Fluency Development II (3.00 cr.)

Repeatable: No

Further developing fluency in listening and reading comprehension of authentic English materials, and in production of oral fluency, through a variety of realistic communicative tasks.

ESLI- 13A Pronunciation, Phonics and Reading Development I (1.50 cr.)

Repeatable: No

Developing pronunciation and reading skill through the study of phonics, the sounds of English, and extensive reading assignments. Course includes one hour of mandatory lab section.

Department consent

ESLI- 13B Pronunciation, Phonics and Reading Development II (1.50 cr.)

Repeatable: No

Further developing pronunciation and reading skill through the study of phonics, the sounds of English, and extensive reading assignments. Course includes one hour of mandatory lab section.

Department consent

ESLI- 20A High Beginning Listening and Speaking Skills I (3.00 cr.)

Repeatable: No

Developing listening and speaking skills for high beginning English language learners. Course includes two hours of mandatory lab/discussion sections.

Department consent

ESLI- 20B High Beginning Listening and Speaking Skills II (3.00 cr.)

Repeatable: No

Further developing listening and speaking skills for high beginning English language learners. Course includes two hours of mandatory lab/discussion sections.

Department consent

ESLI- 21A High Beginning ESL Reading, Writing and Grammar Skills I (3.00 cr.)

Repeatable: No

Developing reading and writing skills for high beginning English language learners. Course includes two hours of mandatory lab/discussion sections.

Department consent

ESLI- 21B High Beginning Reading, Writing and Grammar Skills II (3.00 cr.)

Repeatable: No

Further developing reading and writing skills for high beginning English language learners. Course includes two hours of mandatory lab/discussion sections.

Department consent

ESLI- 22A Intensive Listening and Vocabulary Development I (1.50 cr.)

Repeatable: No

Developing listening skill and vocabulary through meaning-focused listening activities with authentic English materials. Course includes one hour of mandatory lab section.

Department consent

ESLI- 22B Intensive Listening and Vocabulary Development II (1.50 cr.)

Repeatable: No

Further developing listening skill and vocabulary through meaning-focused listening activities with authentic English materials. Course includes one hour of mandatory lab section.

Department consent

ESLI- 30A Low Intermediate Listening and Speaking Skills I (3.00 cr.)

Repeatable: No

Developing basic listening and speaking skills for low intermediate English language learners. Course includes two hours of mandatory lab/discussion sections.

Instructor's consent

ESLI- 30B Low Intermediate Listening and Speaking Skills II (3.00 cr.)

Repeatable: No

Further developing basic listening and speaking skills for low intermediate English language learners. Course includes two hours of mandatory lab/discussion sections.

Department consent

ESLI- 31A Low Intermediate ESL Reading, Writing and Grammar Skills I (3.00 cr.)

Repeatable: No

Developing academic reading, writing and grammar skills for low intermediate English language learners. Course includes two hours of mandatory lab/discussion sections.

Department consent

ESLI- 31B Low Intermediate ESL Reading, Writing and Grammar Skills II (3.00 cr.)

Repeatable: No

Further developing academic reading, writing and grammar skills for low intermediate English language learners. Course includes two hours of mandatory lab/discussion sections.

Department consent

ESLI- 32A Fluency Development I (1.50 cr.)

Repeatable: No

Developing fluency in listening and reading comprehension of authentic English materials, and in production of oral English, through a variety of realistic communicative tasks. Course includes one hour of mandatory lab section.

Department consent

ESLI- 32B Fluency Development II (1.50 cr.)

Repeatable: No

Further developing fluency in listening and reading comprehension of authentic English materials, and in production of oral English, through a variety of realistic communicative tasks. Course includes one hour of mandatory lab section.

Department consent

ESLI- 40A High Intermediate ESL Listening and Speaking Skills I (3.00 cr.)

Repeatable: No

Developing academic listening and speaking skills to communicate effectively in English in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 40B High Intermediate ESL Listening and Speaking Skills II (3.00 cr.)

Repeatable: No

Further developing and reinforcing academic listening and speaking skills to communicate effectively in English in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 41A High Intermediate ESL Reading, Writing and Grammar Skills I (3.00 cr.)

Repeatable: No

Developing academic reading, writing and grammar skills for succeeding in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 41B High Intermediate ESL Reading, Writing and Grammar Skills II (3.00 cr.)

Repeatable: No

Further developing and reinforcing academic reading, writing and grammar skills for succeeding in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 42A High Intermediate Current Events (3.00 - 6.00 cr.)

Repeatable: No

Applying reading, writing, listening, speaking and critical thinking skills learned in ESLI core courses to the study of current events.

ESLI- 42B High Intermediate Current Events II (3.00 - 6.00 cr.)

Repeatable: No

Further applying reading, writing, listening, speaking, and critical thinking skills learned in ESLI core courses to the study of current events.

ESLI- 43A Intensive Writing and Editing Skill Development I (1.50 cr.)

Repeatable: No

Developing writing skills at the upper levels through editing and focused rewriting. Course includes one hour of mandatory lab section.

Department consent

ESLI- 43B Intensive Writing and Editing Skill Development II (1.50 cr.)

Repeatable: No

Further developing writing skills at the upper levels through editing and focused rewriting. Course includes one hour of mandatory lab section.

Department consent

ESLI- 50A Low Advanced ESL Listening and Speaking Skills I (3.00 cr.)

Repeatable: No

Developing more of the necessary academic listening and speaking skills for communicating effectively in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 50B Low Advanced ESL Listening and Speaking Skills II (3.00 cr.)

Repeatable: No

Further developing and reinforcing more of the necessary academic listening and speaking skills for communicating effectively in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 51A Low Advanced ESL Reading, Writing and Grammar Skills I (3.00 cr.)

Repeatable: No

Continuing to develop academic reading, writing and grammar skills necessary for success in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 51B Low Advanced ESL Reading, Writing and Grammar Skills II (3.00 cr.)

Repeatable: No

Continuing to further develop and reinforce academic reading, writing and grammar skills necessary for success in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 52A Writing, Revising and Editing Workshop I (1.50 cr.)

Repeatable: No

Building the skills necessary to be a valuable member of a peer group, identifying the characteristics of good academic writing, and applying the criteria for good academic writing to your own and peer group members' writing. Includes one hour of mandatory lab/discussion.

Department consent

ESLI- 52B Writing, Revising and Editing Workshop II (1.50 cr.)

Repeatable: No

Developing skills necessary to be a valuable member of a peer group, identifying the characteristics of good academic writing, and applying the criteria for good academic writing to your own and peer group members' writing. Includes one hour of mandatory lab/discussion.

Department consent

ESLI- 56A Advanced Project-Based Course I (1.50 cr.)

Repeatable: No

Applying reading, writing, listening, speaking, and critical thinking skills learned in ESLI core courses and working collaboratively to solve a problem or develop a product that will be shared with the larger Stout and Menomonie communities. Course includes one hour of mandatory lab/discussion.

Department consent

ESLI- 56B Advanced Project-Based Course II (1.50 cr.)

Repeatable: No

Further applying reading, writing, listening, speaking, and critical thinking skills learned in ESLI core courses and working collaboratively to solve a problem or develop a product that will be shared with the larger Stout and Menomonie communities. Course includes one hour of mandatory lab/discussion.

Department consent

ESLI- 60A High Advanced ESL Listening and Speaking Skills I (3.00 cr.)

Repeatable: No

Refining and sharpening necessary academic listening and speaking skills for communicating effectively in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 60B High Advanced Listening and Speaking Skills II (3.00 cr.)

Repeatable: No

Reinforcing and further refining and sharpening necessary academic listening and speaking skills for communicating effectively in an American university classroom. Course includes 2 hours of mandatory lab/discussion.

Instructor's consent

ESLI- 61A High Advanced ESL Reading, Writing and Grammar Skills I (3.00 cr.)

Repeatable: No

Refining and sharpening academic reading, writing and grammar skills for success in an American university classroom. Course

includes 2 hours of mandatory lab/discussion.
Instructor's consent

ESLI- 61B High Advanced ESL Reading, Writing and Grammar Skills II (3.00 cr.)

Repeatable: No

Reinforcing and further refining and sharpening academic reading, writing and grammar skills for success in an American university classroom. Course includes 2 hours of mandatory lab/discussion.
Instructor's consent

ESLI- 62A University Success I (1.50 cr.)

Repeatable: No

Preparation for the cultural and academic expectations of the American university classroom. Includes one hour of mandatory lab/discussion.
Instructor's consent

ESLI- 62B University Success II (1.50 cr.)

Repeatable: No

Advanced preparation for the cultural and academic expectations of the American university classroom. Includes one hour of mandatory lab/discussion.
Instructor's consent

ET – Engineering Technology

ET- 100 Introduction to Engineering Technology (1.00 cr.)

Repeatable: No

Definition, history, and future of the engineering technology field and the present and emerging concentration areas. Business and industry links to options within engineering technology and the necessary preparation to meet graduates' future professional demands.

ET- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ET- 405 Capstone I: Design Practicum (3.00 cr.)

Repeatable: No

Capstone course for all Engineering Technology concentrations. Practical application of concentration topic in a team project. Creativity, documentation standards, design for manufacturability, design analysis, team dynamics, finite element analysis, and communication skills are applied to an industrial standard in the design of a machine, system, or product.
Prerequisites or concurrent enrollment in MECH-332 or MFGT-343 or INMG-440 or INMG-365 or ELEC-274; Senior status

ET- 410 Capstone II: Design Lab (3.00 cr.)

Repeatable: No

An experimental study in the design of electro- mechanical systems. Design, functional prototype construction, experimentation and validation of systems are emphasized.

Prerequisites: take ET-405 and ELEC-341

ET- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

FCSE – Family and Consumer Science Education

FCSE- 101 Introduction To Family And Consumer Sciences Education (2.00 cr.)

Repeatable: No

Contribution of Family and Consumer Sciences to development of individuals and families; responsibilities of a Family and Consumer Sciences professional.

FCSE- 149 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department consent

FCSE- 201 Teaching Methods In Family And Consumer Sciences Education (2.00 - 3.00 cr.)

Repeatable: No

Presentation strategies appropriate in the field family and consumer sciences education. Background check required.

FCSE- 249 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department consent

FCSE- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

FCSE- 300 Externship: Family And Consumer Sciences Community Education (4.00 - 8.00 cr.)

Repeatable: No

Practicum in one or more of the following family and consumer sciences education programs: extension services, elementary education, post- secondary education, occupational teaching experience and community educational services. Approval of graduate program director required if taken for graduate credit.

Department consent

FCSE- 303 Family And Consumer Sciences Education In The Middle And Elementary Schools (3.00 cr.)

Repeatable: No

Develop techniques, materials and curriculum concepts in family and consumer sciences education with application of human growth and development principles for teaching in middle and elementary school.

FCSE- 341 Prestudent Teaching In FCSE Classrooms (1.00 cr.)

Repeatable: Yes

Supervised experience in classroom teaching for development of motor, perceptual, social and cognitive learning through family and consumer sciences education substantive areas.

Benchmark I Completed

FCSE- 349 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department consent

FCSE- 380 Consumer Economics (3.00 cr.)

Repeatable: No

Personal and family consumer economics for family and consumer education programs; management of human and non-human resources in achieving personal, family and community goals.

Prerequisites: take either ECON-201 or ECON-210

FCSE- 385 Family Housing (3.00 cr.)

Repeatable: No

Individual/family's housing needs and resources as a basis for family and consumer education programs. The impact of historical, environmental, social, cultural, and technological, aesthetic, and design influences.

FCSE- 390 Family and Consumer Sciences Ed Curriculum and Evaluation (4.00 cr.)

Repeatable: No

Development of curriculum and evaluation tools for family and consumer sciences education subject matter and critical thinking skills.

Prerequisite: Benchmark I completion

FCSE- 397 Field Experience In Family And Consumer Sciences Education (2.00 cr.)

Repeatable: No

Field experience related to family and consumer sciences education skills and knowledge used in teaching wage-earning courses at secondary level.

Department consent

FCSE- 448 Student Teaching-Family And Consumer Sciences Education (8.00 - 16.00 cr.)

Repeatable: No

Student teaching practicum in K-12 settings in family & consumer

sciences education/family life.

Department consent

Prerequisites: Must have minimum GPA 2.75; take FCSE-301 and FCSE-360

FCSE- 449 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department consent

FCSE- 451 Family Life Education Programs (2.00 cr.)

Repeatable: No

Development of family life education programs including methods, materials and techniques for teaching family relationships and child development at the secondary level.

FCSE- 488 Internship Teaching (8.00 - 16.00 cr.)

Repeatable: No

Alternate method of obtaining student teaching experience. Teacher interns receive license to teach and salaried appointments in cooperating school systems for one semester.

Department consent

Prerequisite: take FCSE-301

FCSE- 497 Field Experience In Family And Consumer Sciences Education (2.00 cr.)

Repeatable: No

Field experience related to family and consumer sciences education skills and knowledge used in teaching wage-earning courses at secondary level.

Department consent

FCSE- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

FN – Food and Nutrition

FN- 101 Dietetics As A Profession (1.00 cr.)

Repeatable: No

Survey of types of dietetic and foodservice administration programs in the United States; role and function of staff; professional literature.

**FN- 102 Nutrition For Healthy Living (2.00 cr.)
*Health and Physical Education - Health***

Repeatable: No

Food selection and eating patterns/standards, applied nutrition knowledge and interrelationships, nutrition information source analysis, weight management, the nutrition- exercise-fitness connection. Analysis of personal lifestyle and food patterns in relationship to optimal physical and mental well- being.

FN- 105 Food Service Sanitation (1.00 cr.)

Repeatable: No

Preparation for the ServSafe Food Protection Manager Certification Examination. Safe food handling practices.

FN- 110 Food Science as a Profession (2.00 cr.)

Repeatable: No

Introduction to Food Science and Technology with emphasis on current issues, competencies, career opportunities, and professional responsibilities; coursework and career planning; leadership and success skills; field visits and case studies in the food and agricultural industry.

FN- 115 Principles Of The Food Industry (2.00 cr.)

Repeatable: No

Analysis of food processes, procedures and regulations. Application to protocols of the food industry. Appreciation of safe and healthy food service products.

FN- 123 Science of Food (2.00 cr.)

Global Perspective, Natural Sciences - Life Sciences

Repeatable: No

Integrated scientific concepts in food products and ingredients; food composition and physical properties; methods, processes, and unit operations in food manufacturing.

FN- 124 Foods (4.00 cr.)

Repeatable: No

Scientific principles and application in the selection, preparation and service of food.

FN- 149 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department consent

FN- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

FN- 202 Food And Beverage Distribution Industry (3.00 cr.)

Repeatable: No

An introductory course for students in the field of food and beverage merchandising and distribution. A study of history, evolution, classification, manufacture/production, packaging, distribution, and merchandising with an emphasis on trends and employment. Resource persons from industry and field trips will be utilized.

FN- 207 Medical Terminology (1.00 cr.)

Repeatable: No

Medical terminology for allied health occupations. Self-paced instruction utilizing a word-building system to learn word parts used

to construct or analyze new terms. Emphasis on spelling, definition, usage and pronunciation.

FN- 210 Issues and Ethics in Food and Nutrition (3.00 cr.)

Social Responsibility and Ethical Reasoning

Repeatable: No

Apply ethical reasoning and interdisciplinary approaches to analyze and solve contemporary issues in food and nutrition.

FN- 212 Nutrition (3.00 cr.)

Repeatable: No

Basic principles of nutrition applied to current issues in health maintenance.

Prerequisites: take BIO-132 or BIO-234 and take CHEM-115 or CHEM-125

FN- 215 Art And Science Of Food (3.00 cr.)

Repeatable: No

Analysis and application of food principles applied to storage, preparation and service. Special emphasis on food safety and the art of food preparation.

Prerequisite: take HT-121

FN- 222 Food Technology (2.00 cr.)

Global Perspective, Technology

Repeatable: No

Food processing technology and how it impacts society, individual health and well-being, environment and the future; technological innovations and new developments to meet the changing requirements of society and increasing global demand for food. A special course fee applies.

FN- 225 Spec Topics In Food And Nutrition (1.00 - 2.00 cr.)

Repeatable: Yes

Study of special topics in food and nutrition.

FN- 236 Nutrition For Young Children (1.00 - 2.00 cr.)

Repeatable: No

Impact of nutrition on growth, development and health of young children. Assessment of nutritional status, changing needs and eating patterns, the link between nutrition, dietary practices, and behavior, and translating current nutrition information into effective nutrition education strategies for children.

Prerequisites: take FN-102 or FN-106

FN- 240 Food Science (4.00 cr.)

Repeatable: No

Physical and chemical changes affecting selection, preparation and service of food.

Prerequisite: take CHEM-201

FN- 244 Farm to Fork: Food Issues (3.00 cr.)

Contemporary Issues

Repeatable: No

Contemporary issues in agriculture, food production, and food processing; science, technology, and policy in the food system;

critiques in agricultural sustainability; food consumption choice; food system changes and implications on individuals and society.

FN- 249 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department consent

FN- 260 Menu Planning And Design (2.00 cr.)

Repeatable: No

Principles of menu planning, design and production for commercial and institutional food establishments.

FN- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

FN- 310 Lifespan Nutrition (3.00 cr.)

Repeatable: No

Nutrition concepts and concerns associated with each lifespan stage; integration of social, psychological, cultural, economic, and legislative factors to develop issue-centered approaches to meet nutrition needs.

Prerequisites: take FN-102 or 106; take one Biology course

FN- 312 Nutritional Assessment (2.00 cr.)

Repeatable: No

Introduction to basic components of nutritional assessment as applied to individuals.

Prerequisite: take FN-212

FN- 320 Advanced Nutrition (3.00 cr.)

Repeatable: No

Concepts of the metabolic and physiological functions of nutrients at the molecular, cellular, tissue, organ and system level. Emphasis on coordinated control of nutrient metabolism.

Prerequisite: take FN-212 and CHEM-311

FN- 325 Special Topics In Food And Nutrition (1.00 - 3.00 cr.)

Repeatable: Yes

Study of special topics in food and nutrition.

Prerequisite: take either FN-124 or FN-215

FN- 330 Institutional Menu Planning (3.00 cr.)

Repeatable: No

Principles of cycle menu planning, design, and marketing for institutional food settings, which includes culinary skills, basic food preparation and modified menus to meet the special dietary needs of an individual or group.

Prerequisite: take FN-212

FN- 342 Advanced Foods (3.00 cr.)

Repeatable: No

Comparative studies of food selection and preparation; appraisal of foods.

Prerequisite: FN-124 or FN-240

FN- 349 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department consent

FN- 350 Unit Operations in Food Processing (3.00 cr.)

Repeatable: No

Principles, technology, and application of unit operations in food processing; laboratory and pilot-scale processing of food and agricultural commodities; quantitative measurements and analysis of unit operations.

Prerequisite: take FN-240

FN- 355 Sports Nutrition (3.00 cr.)

Repeatable: No

Nutritional and metabolic requirements of physical activity. Metabolic fuel utilization during exercise and physiological adaptations to exercise training will be discussed. The health and well-being benefits of an optimal diet-exercise regime will be emphasized.

Prerequisite: take FN-212

FN- 360 Nutrition Counseling: A Team Approach (3.00 cr.)

Repeatable: No

Inter-disciplinary team approach to individual and group client-centered nutrition counseling which includes assisting and advising clients on dietary information. Skills and techniques based on nutrition counseling theories that are most useful to registered dietitians in enhancing quality of life and planned nutrition intervention.

Prerequisite: take FN-312

FN- 380 Community Nutrition (3.00 cr.)

Repeatable: No

Current status and legislation of community nutrition programs. Assessment of community needs and resources, program planning, funding, and evaluation. The role of the community nutritionist/home economist to help individuals, families, and communities solve nutrition problems.

Prerequisite: take FN-212

FN- 396 Food Science Workshop (2.00 cr.)

Repeatable: No

Designed to meet the science and family and consumer sciences standards in Wisconsin. Content presented will build capacity for food science and science teachers to create science-based learning experiences related to food.

Instructor's consent

FN- 396A Obesity and Eating Disorders (3.00 cr.)

Repeatable: No

Examines the complex issues associated with obesity and eating disorders. Consideration of health and psycho-emotional effects on the individual as well as relevant social, economic, and public health implications. Exploration of the etiology of obesity and the spectrum of disordered eating as well as appropriate treatment approaches. Prerequisites: take FN-102 or FN-212

FN- 397 Field Experience (2.00 cr.)

Repeatable: No

FN- 397C Field Experience (Seminar): Dietetics (1.00 - 2.00 cr.)

Repeatable: No

Field experience related to the dietetic areas. Prior approval of field position, 320 hours of work experience, and seminar. Written reports required for two-credit option. Department consent

FN- 397E Field Experience: Dietetics (1.00 cr.)

Repeatable: No

Field experience related to the dietetic areas. Prior approval of field position, 320 hours of work experience, and seminar. Written reports required for two-credit option. Department consent

FN- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

FN- 400 Food Quality (4.00 cr.)

Repeatable: No

Applications of qualitative and quantitative tools in conjunction with statistical methods to implement quality management in the food industry.

Prerequisites: Take FN-350, and take either STAT-130 or STAT-320

FN- 406 Nutrition Education (3.00 cr.)

Repeatable: No

Nutrition education as planned behavioral change: problems and solutions in instructing various populations; identification, development and evaluation of nutrition resources.

Prerequisite: take FN-212

FN- 408 Preprofessional Development In Dietetics And Nutrition (1.00 cr.)

Repeatable: No

Provide a step by step, efficient and effective process toward completion of application for Supervised Practice Programs (Dietetic Internships), graduate school or employment.

FN- 410 Food & Nutrition Policy Regulation & Law (3.00 cr.)

Repeatable: No

Food and nutrition policy development and evolution. Key acts and agencies governing food regulation and law. Process of creating or changing law. Compliance and enforcement rules in inspection, labeling, export and import. Administrative practice in food law including proceedings and judicial review.

FN- 413 Maternal And Child Nutrition (3.00 cr.)

Repeatable: No

Application of principles to maternal, infant, child and adolescent nutrition.

Prerequisites: take FN-212 & take either BIO-132 or BIO-234

FN- 414 Catering (3.00 cr.)

Repeatable: No

Theory and application of operational and managerial principles for on/off-premise catering for special events. (Cannot be taken for credit by students who have previously taken HT-424.) A special course fee applies.

Prerequisite: FN-124 or FN-240

FN- 415 Nutritional Issues In Gerontology (3.00 cr.)

Repeatable: No

Theory and relationships of nutrition, longevity and aging. Food and nutrition legislation for the elderly--theory and implementation. Nutritional implications of acute and chronic disease states common among the elderly.

Prerequisite: take FN-212

FN- 417 Medical Nutritional Therapy I (3.00 cr.)

Repeatable: No

Principles and methods for use in certain pathological conditions or chronic and acute disease processes. Incorporates principles of medical nutritional therapy in nutrition assessment, diet prescription, medications, care plans and documentation.

Prerequisites: take FN-312 and CHEM-311

FN- 418 Medical Nutritional Therapy II (4.00 cr.)

Repeatable: No

Principles and methods for use in certain pathological conditions or chronic and acute disease processes. Incorporation of the principles of nutrition assessment, diet prescription, medications, care plans, and documentation into the management of disease processes.

Prerequisites: take CHEM-311, FN-312 and FN-417

FN- 420 Food Styling (1.00 - 3.00 cr.)

Repeatable: Yes

Food as media for artistic expression; effective use of color, form and texture.

Prerequisite: FN-124 or FN-240

FN- 425 Food Chemistry (3.00 cr.)

Repeatable: No

Chemical structure and properties of food components, including water, carbohydrates, protein, lipids, other nutrients and food additives; chemical reactions of food components during processing, storage and utilization.

Prerequisite: take FN-240

FN- 431 Readings In Food Science And Nutrition (1.00 - 2.00 cr.)

Repeatable: Yes

Critical reading, evaluating, and reporting from pertinent current journals and other publications.

FN- 435 Food Analysis (3.00 cr.)

Repeatable: No

Principles and methods in analysis of nutritive and bioactive components in food; nutrient and ingredient characterization; analytical methods in food quality and safety assurance; standard methods in the food quality control laboratory.

Prerequisite: take CHEM-315

FN- 438 Experimental Foods (3.00 cr.)

Repeatable: No

Experimentation with selected food materials, techniques and equipment; directed study in individually chosen area.

Prerequisites: take FN-124 or FN-240, and take CHEM-115 or CHEM-125 or CHEM-135

FN- 442 Basic Sensory Analysis (3.00 cr.)

Repeatable: No

Basic understanding of the psychobiology and physiology of senses and the role both play in consumer product acceptance. Basic tests of sensory analysis, including both objective trained panel difference tests and subjective preference/ acceptance tests. Appropriate for all majors who produce products for/ or merchandise to consumers.

Prerequisite: FN-124 or FN-240

FN- 449 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Entails recurring, supervised work periods, building and expanding on previous experiences.

Department consent

FN- 450 Food Engineering (3.00 cr.)

Repeatable: No

Application of pertinent chemistry, physics and mathematics principles to food processing.

Prerequisites: take CHEM-201, MATH-153, MATH-154, and FN-350

FN- 461 Multicultural Aspects Of Food & Nutrition Patterns (3.00 cr.)

Repeatable: No

Food and nutrition patterns as influenced by social, religious, geographical, economic and political factors. Cultures emphasized include Native American, African American, Hispanic and Asian American. Food as a means of cross-cultural communication.

Prerequisite: FN-124 or FN-240

FN- 465 Food Product Development (3.00 cr.)

Repeatable: No

Food ingredient properties; integrated application of professional competencies for food product development.

Prerequisite: take FN-350

FN- 470 Food Distribution Operations And Control (3.00 cr.)

Repeatable: No

Current trends and management strategies in the distribution of food and beverages, from manufacturer to consumer.

FN-202 and BUMKG-330

FN- 480 Research Critiques in Food Microbiology (3.00 cr.)

Repeatable: No

Research evidence examining mechanistic concepts in microbial food spoilage, infectious disease and molecular epidemiology. Methods of assessing safety risks and design of interventions to manage risks in food processing environments.

Prerequisites: Take BIO-306 or CHEM-311

FN- 497C Field Experience: Food Systems And Technology (1.00 cr.)

Repeatable: No

Seminar: analysis, interpretation and synthesis of food systems and technology principles through a written paper and oral seminars following 320 hours of field work in an approved position. Integrates synergistic principles/activities from program courses and among concentrations.

Department consent

FN- 497E Field Experience: Food Systems And Technology (1.00 cr.)

Repeatable: No

Food systems and technology area field experience. Approved field position, 320 hours of work experience, and development of concept/outline for written analysis paper.

Department consent

FN- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

FREN – French**FREN- 101 Elementary French I (4.00 cr.)**

Communication Skills Language, Foreign Language Global Perspective

Repeatable: No

Listening, pronunciation, reading, and writing. Basic vocabulary, polite phrases, questions and answers. Adjective agreement, present and some past-tense verbs. Cultural information about the French-speaking world.

FREN- 102 Elementary French II (4.00 cr.)

Communication Skills Language, Foreign Language Global Perspective

Repeatable: No

Second level of understanding, speaking, reading, and writing in French. Introduction to future, conditional, imperfect and subjunctive verbs. Direct and indirect object pronouns. Short spontaneous and directed conversations. topics in cultures of French-speaking people. One year H.S. French or FREN-101 required.

FREN- 121 Practical French I (2.00 cr.)

Foreign Language Global Perspective

Repeatable: No

First quarter college French. Conversational phrases and vocabulary for practical situations. Basic present tense verb patterns. Intensive pronunciation drill. Not for students who have taken FREN-101. Not for students who took FREN-101.

FREN- 122 Practical French II (2.00 cr.)

Communication Skills Language, Foreign Language Global Perspective

Repeatable: No

Second quarter college French, conversational phrases and vocabulary, irregular and past tense verb patterns. Not appropriate for students who have completed FREN-101. One year of H.S. French or FREN-121 required.

Not for students who took FREN-101.

FREN- 124 Practical French IV (2.00 cr.)

Communication Skills Language, Foreign Language Global Perspective

Repeatable: No

Fourth quarter college French. Future, conditional and subjunctive verbs. Introduction to relative pronouns. Conversational vocabulary. (Not for students who have completed FREN-102.)

Not for students who took FREN-102.

FREN- 201 Intermediate French I (4.00 cr.)

Foreign Language and Culture, Foreign Language Global Perspective

Repeatable: No

Vocabulary development through readings and discussion on French and Francophone civilization. History, art, music, short stories and poems, including contemporary culture. Taught in French. Two years H.S. French or FREN-102 required.

FREN- 202 Intermediate French II (4.00 cr.)

Communication Skills Language, Foreign Language Global Perspective

Repeatable: No

Grammar review, contemporary vocabulary, free conversation in French. Three years H.S. French or FREN-201 required.

FREN- 299 Independent Study (1.00 - 3.00 cr.)

Foreign Language Global Perspective

Repeatable: Yes

Department consent

FREN- 499 Independent Study (1.00 - 3.00 cr.)

Foreign Language Global Perspective

Repeatable: Yes

Department consent

GDD – Game Design and Development

GDD- 101 Introduction To Video And Computer Game Design And Development (3.00 cr.)

Repeatable: No

Principles of video and computer game design and development. Students design and develop games, analyze a popular game, and learn about various aspects of the game industry. Game design, story development, visual art production and programming.

GDD- 325 Two Dimensional Game Design and Development (4.00 cr.)

Repeatable: No

Design and develop two-dimensional games from concept to completion in teams. Production environment will be set up to reflect the approach used in the game development industry.

Prerequisite: take either CS-244 or DES-220

GDD- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

GDD- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

GDD- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

GDD- 450 Three-Dimensional Game Design and Development I (4.00 cr.)

Repeatable: No

Design and development of 3D games from concept to prototype in teams, modeling the approach used in the game development industry. The first of a two-semester sequence to be followed by GDD-451.

Prerequisites: Take GDD-325 and one of the following: 1) completion of or concurrent enrollment in CS-343; or 2) DES-372 and completion of or concurrent enrollment in either DES-374, DES-378, or DES-379

GDD- 451 Three-Dimensional Game Design and Development II (4.00 cr.)

Repeatable: No

Design and development of 3D games from concept to prototype in teams, modeling the approach used in the game development industry. Second of two-semester sequence; to be preceded by GDD-450.

Prerequisite: Take GDD-450

GDD- 475 Game Design and Development Internship (1.00 - 3.00 cr.)

Repeatable: Yes

Off-campus work and study in approved position to gain experience in game development. Interns receive appointments with cooperating companies for summer or a semester.

Instructor's consent

GDD- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

GEM – Golf Enterprise Management

GEM- 101 Introduction To Golf Enterprise Management (1.00 cr.)

Repeatable: No

Overview of the Specialization and B.S. in Golf Enterprise Management, the golf industry, national and international golf associations, and careers in the golf industry.

GEM- 201 Principles Of Golf Enterprise Management (3.00 cr.)

Repeatable: No

Comprehensive survey of golf facility operations and management from perspectives of resort, private, semi-private, and daily fee courses, to include principles of business, customer service, human resource management, course design and management, retail and back shop operations, food and beverage management, and event planning.

GEM- 207 Club Fitting and Repair (2.00 cr.)

Repeatable: No

Overview, techniques, customer satisfaction, and benefits of custom golf club fitting and repair in golf enterprise management. A special course fee applies.

Prerequisites: take GEM-201 and PE-129

GEM- 217 Golf Swing Analysis and Instruction (2.00 cr.)

Repeatable: No

Fundamentals of teaching golf including grip, setup, alignment and the full swing. Students will analyze golf swings and correct errors in swing fundamentals. A special course fee applies.

Prerequisites: Take GEM-207 and MATH-123

GEM- 250 Turfgrass Management For Golf Courses (3.00 cr.)

Repeatable: No

Investigates the broad subject of turfgrass management. Emphasis is placed on the application of basic turfgrass principles to golf course turfgrass culture.

Prerequisite: take GEM-101

GEM- 277 Software And Technology (3.00 cr.)

Repeatable: No

Investigates the use of software and technology in the golf industry. Marketing, revenue planning, tee time management, point of sale, guest and staff scheduling and performance evaluation will be analyzed using proprietary industry software.

Prerequisite: take GEM-101

GEM- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

GEM- 301 Customer Development, Retention And Marketing (3.00 cr.)

Repeatable: No

Current trends and programs for golf course customer recruiting and retention, marketing strategies, conducting and applying market research including database and internet marketing for golf course customer development and retention in public fee, semi-private, private and resort facilities.

Prerequisites: take GEM-101 and GEM-201, and take either BUMKG-330 or HT-344

GEM- 349 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department consent

GEM- 350 Golf Course Soils, Layout, And Design (3.00 cr.)

Repeatable: No

Introduction to golf course layout and design, including soil characteristics that affect successful turf grass establishment and maintenance. Topics include soil components, physical and chemical soil properties, drainage, irrigation, golf course layout, design and construction, and risk assessment.

Prerequisites: take GEM-101 and GEM-201

GEM- 445 Event Management (3.00 cr.)

Repeatable: No

Planning, organization and the management of events will be investigated for the hospitality, tourism and golf industries.

Emphasis is placed on the design, internal management systems and post- event evaluation.

GEM- 449 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department consent

GEM- 450 Environmental Golf Course Management (3.00 cr.)

Repeatable: No

Emphasizes the applied knowledge related to golf course operations and environmental perspective towards effective management.

Prerequisite: take GEM-250

GEM- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

GEOG – Geography

GEOG- 104 World Geography (3.00 cr.)

Global Perspective, Social and Behavioral Sciences - Geography

Repeatable: No

Introduction to regional and cultural geography of the world; physical and human resources of major areas of the globe.

Not open to students taking GEOG-251

GEOG- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

GEOG- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

GEOG- 251 Introduction to Geographic Information Systems (4.00 cr.)

Repeatable: No

Experience, using state of the art GIS and GPS equipment and theoretical background explaining the many roles GIS technology has in displaying analyzing spatial problems. Major components include computer representation of geographic information, fundamentals of cartography, construction of GIS databases, spatial analysis, and application areas of GIS.

GEOG- 290 Global Political Ecology (3.00 cr.)

Contemporary Issues, Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Social, political, and economic origins of contemporary environmental problems from sociological, anthropological and geographic perspectives; social construction of nature and knowledge; environmentalism, environmental racism and environmental justice in cross-cultural perspective; ethical implications of contemporary environmental problems regarding perspectives and distributions of justice.

GEOG- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

GEOG- 310 Geography of Food (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category A

Repeatable: No

Analysis of food "geographies" - how food travels from farm to table; the importance of geography in the production, distribution and consumption of food. Exploration of issues of food democracy, food justice, and food sovereignty. Special attention to racial and class-based inequities within the global food system.

GEOG- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

GEOG- 351 Intermediate Geographic Information Systems (4.00 cr.)

Repeatable: No

Basic analytical operations in Geographic Information Systems using GIS software.

Prerequisite: take GEOG-251

GEOG- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

GEOG- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

GEOG- 451 Advanced Geographic Information Systems (4.00 cr.)

Repeatable: No

Integration of Geographic Information Systems (GIS) and analytical and quantitative methodologies using spatial analysis, geostatistical analysis, network analysis, and 3-D analysis.

Prerequisite: take GEOG-351

GEOG- 452 Geographic Information Systems Research Analysis

(2.00 - 4.00 cr.)

Repeatable: No

Individualized research applying advanced GIS techniques to problems related to students' areas of study under the supervision of faculty members in their programs. Students plan, design and execute GIS projects which build geographic databases, analyze data spatially, and present results.

Prerequisite: take GEOG-451

GEOG- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HDFS – Human Development and Family Studies

HDFS- 101 Introduction To Human Development And Family Studies (1.00 cr.)

Repeatable: No

Fields of human development and family studies; occupational opportunities in programs serving families and children.

HDFS- 115 Healthy Couple Relationships (3.00 cr.)

Repeatable: No

Intimate relationship development; characteristics of diverse committed relationships. Elements of healthy relationships and issues leading to relationship dissolution. topics include: self-awareness, communication, love, commitment, sexualities, sexual decision-making, partner selection, and relationship dysfunctions. Realistic expectations about intimate relationships.

HDFS- 124 Human Development: Early Childhood (3.00 cr.)

Repeatable: No

Principles and theories of growth and development prenatal through age 8, with a systemic perspective on physical, motor, cognitive, language, social and emotional development. Observations required.

HDFS- 195 Honors Seminar: Lifespan Human Development (3.00 cr.)

Social and Behavioral Sciences - Psychology

Repeatable: No

Review, discuss and analyze theories of human development across the lifespan.

HDFS- 215 Dynamics Of Family Development (3.00 cr.)

Repeatable: No

A study of the family with emphasis on environmental factors significant in marriage and family relationships.

HDFS- 225 Skill Training For Individual/Family Interventions (3.00 cr.)

Repeatable: No

Concepts and skills in developing rapport, assessing goals and initiating change with children, parents, couples and families across the life span in professional settings.

HDFS- 249 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview. Instructor's consent

HDFS- 255 Lifespan Human Development (3.00 cr.)

Social and Behavioral Sciences - Psychology

Repeatable: No

Lifespan individual development. Critical examination of influences on individual development across the lifespan.

HDFS- 257 Lifespan Sexuality (3.00 cr.)

Health and Physical Education - Health, Social Responsibility and Ethical Reasoning

Repeatable: No

Introduction to human sexuality over the lifespan, utilizing an individual and family perspective. Development of sexual behavior, relationships, and gender characteristics from infancy to late life. Emphasis on ethical issues and implications of sexuality, gender and sexual orientation. Discussion of love and intimacy as key aspects of sexuality.

HDFS- 264 Child Guidance (3.00 cr.)

Repeatable: No

Developmentally appropriate principles and strategies for child guidance. Systems perspective, positive discipline, theoretical approaches, current topics, developing a personal/eclectic approach.

Prerequisite: take HDFS-124

HDFS- 270 Seminar On Self-Growth (3.00 cr.)

Repeatable: No

Course in personal growth and self-management. A starting point in working with families in a diverse world is to begin with an understanding of self. Learning strategies are aimed at bridging theory with real-life experiences.

HDFS- 275 Race Matters: Interdisciplinary Investigations (3.00 cr.)
Racial & Ethnic Studies Category A

Repeatable: No

Application of cognitive and emotional skills to racial topics such as interpersonal relationships, media, and politics. Types of racism. How to talk about race. Antiracist strategies.

HDFS- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HDFS- 310 Family Stress, Coping And Adaptation (1.00 cr.)

Repeatable: No

Impact of family development and stress on individual and family well-being.

HDFS- 313 Parent Education/Involvement (2.00 cr.)

Repeatable: No

Parent groups: training of leaders, survey of literature. Practicum with parent groups.

HDFS- 320 Divorced, Single Parent And Remarried Family (2.00 cr.)

Repeatable: No

Trends and issues in divorce, single parenting and remarriage related to effects on adults, children and society.

HDFS- 325 Human Development: Middle Childhood And Adolescence (3.00 cr.)

Repeatable: No

Empirical study of physical, intellectual, social and emotional development of children.

HDFS- 330 Human Development: Early And Middle Adulthood (3.00 cr.)

Repeatable: No

Study of adults in the family context during the early and middle years.

HDFS- 332 Death And Bereavement (3.00 cr.)

Repeatable: No

Significance of death and bereavement for the American culture, individual and family. Special consideration given to major tasks of grieving for children and adults.

HDFS- 335 Critical Cultural Competence (3.00 cr.)

Racial & Ethnic Studies Category A, Global Perspective

Repeatable: No

Critical cultural competence and application to individuals and families. Systems of privilege and oppression. How socio-historical

contexts shape interpersonal dynamics. Self-examination of cultural assumptions. Practice in critically thinking about difference and how to connect across differences.

HDFS- 336 Practice in Critical Cultural Competence (1.00 cr.)

Repeatable: No

Practice of critical cultural competence skills in settings serving individuals and families. Working with and connecting across categories of difference to increase awareness, sensitivity, and understanding.

Prerequisite: HDFS-335

HDFS- 340 Human Development: Late Adulthood (3.00 cr.)

Repeatable: No

Survey of the field of gerontology focusing on what it means to grow old in the United States from a systemic perspective. Multicultural attitudes toward aging; the psychological, physical, social and economic needs and problems of the older population are addressed. Consideration will be given to the personal, familial, environmental and social resources of the older population.

Prerequisite: take HDFS-215

HDFS- 341 Family Caregiving To Dependent Elders (1.00 cr.)

Repeatable: No

Unique challenges confronting adult children who provide care to aging parents. Government, agency, workplace and family policies and practices promoting and/or undermining family strengths and well-being.

HDFS- 345 Health Care Dilemmas & Decisions For Families (3.00 cr.)

Repeatable: No

Bioethical issues facing U.S. families. Selected issues provoke deep and troubling questions that will be addressed from a multidisciplinary perspective through readings, student-led discussion, lectures, and case reviews.

HDFS- 349 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview.

Instructor's consent

HDFS- 350 Women's Relationships In Later Life (3.00 cr.)

Repeatable: No

Women's experiences in later life. Impact of race, culture, class, sexual orientation upon aging. Images of aging women in contemporary literature and the media. Older women's experiences in familial relationships and friendships.

Must be Junior level or higher

HDFS- 352 Sexual and Gender Identities in Families and Society (3.00 cr.)

Contemporary Issues

Repeatable: No

Introductory understanding of sexual and gender identities in families and society.

HDFS- 364 Sibling Relationships (3.00 cr.)

Repeatable: No

Seminar focusing on sibling relationships across the life course, examining the issues, processes and dynamics affecting these bonds. Must be Junior level or higher

HDFS- 365 Family Resource Management (3.00 cr.)

Repeatable: No

Individual and family use of resources to meet needs and attain goals. Critical evaluation of resource disparities and how families are impacted. Develop approach to working with diverse families and external systems on issues of resource management.

HDFS- 370 Living with the Spectrum: Autism and Family Life (3.00 cr.)

Repeatable: No

Unique challenges, rewards, and family dynamics experienced by families impacted by autism spectrum disorder. Theoretical frameworks, life course and cultural considerations, ethical and policy issues, and implications for family practitioners.

HDFS- 375 Grantsmanship For Nonprofits (1.00 - 2.00 cr.)

Repeatable: No

Explore the availability of foundation grant money for nonprofit organizations. Designed to give the beginning grant writer an overview of grant purposes, foundation funding sources, proposal development and writing.

HDFS- 380 Case Management for Human Services (3.00 cr.)

Repeatable: No

Human services is generic for professional and paraprofessional jobs in diverse settings. Primary purpose of human services is to assist individuals and communities to function as effectively as possible. Introduction to historical context, theoretical perspectives, basic knowledge and beginning skills in case management.

Prerequisite: take HDFS-225

HDFS- 395 Special Topics In Human Development (1.00 - 2.00 cr.)

Repeatable: Yes

Special topics in human development; repeatable for different topics.

Must be Junior level or higher

HDFS- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HDFS- 410 Families in an Electronic World (3.00 cr.)

Contemporary Issues

Repeatable: No

Effects of changes in communication technologies on family life over the past several decades. Impacts of television, computers, cell phones, and other communication technologies on daily life and family dynamics. Social issues stemming from technological advances and affecting family life including social networking, internet gaming, cybersex, cyberbullying, and the digital divide.

HDFS- 420 Family Research And Methodology (3.00 cr.)

Repeatable: No

Analysis of family theory, research methodology and selected topics in family relations.

Prerequisites: take HDFS-115 and HDFS-215

HDFS- 423 Spirituality Across The Lifespan (2.00 cr.)

Repeatable: No

Seminar discussion of autobiographical and biographical accounts of individual's spiritual experiences, beliefs and spiritual development over the life cycle.

Must be Junior level or higher

HDFS- 426 Comparative Family Agencies - Ireland and U.S. (3.00 cr.)

Repeatable: No

A study abroad course designed to compare child and family agencies, human services providers, and mental health providers in Ireland with those in the U.S. Travel in Ireland, includes cultural immersion experiences.

HDFS- 426 Special Topics In The Study Of Family Life (1.00 - 3.00 cr.)

Repeatable: No

Family life programs and literature; individual study of problems of personal or professional interest.

HDFS- 442 Geriatric Functional Assessment (4.00 cr.)

Repeatable: No

Multi-disciplinary assessment applied to elderly at critical transition points. Assessment of social and economic status, functional status (activities of daily living and instrumental activities of daily living), mental health, and environmental characteristics. Explore various measurement instruments. Background check required.

Prerequisite: take HDFS-340

HDFS- 449 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved business/industry position related to the student's major. Selection by application and interview.

Instructor's consent

HDFS- 450 Family Policy (3.00 cr.)

Repeatable: No

Family policy and family perspective in policymaking. Reciprocal relationship between families and public policies. Family policy formation, implementation, evaluation and advocacy.

Prerequisites: take HDFS-115 and HDFS-215

HDFS- 454 Suicide And The Family: Family And Community Intervention (1.00 cr.)

Repeatable: No

Analysis of attempted and completed suicides from an interdisciplinary perspective. Forms of intervention, with emphasis upon family therapy, are compared, contrasted, and evaluated for suitability.

Prerequisite: take HDFS-215

HDFS- 456 Abuse And The Family (3.00 cr.)

Repeatable: No

Definition and analysis of types of abuse in family context.

Interrelationship of victims, perpetrators, other family members, helping professionals, social context. Risk factors, effects, reporting and recovery.

Prerequisites: take HDFS-115 and HDFS-215

HDFS- 460 Religious Diversity and the Workplace (3.00 cr.)***Contemporary Issues***

Repeatable: No

Major world religions and some smaller religions, practices, similarities and differences within and between religions; implications of religious practices and beliefs for workplace settings.

HDFS- 490 Professional Issues: Human Development And Family Studies (2.00 cr.)

Repeatable: No

Issues related to professional development in areas of human development and family studies.

Prerequisites: For HDFS majors only. Must have 2.5 GPA in professional core.

HDFS- 491 Internship in Human Development and Family Studies (4.00 - 8.00 cr.)

Repeatable: Yes

Internship experience in human development and family studies. Student will be placed in community agency or organization and supervised by site supervisor.

Department consent

Prerequisite: take HDFS-490; must have 2.5 GPA in the professional core and program director approval

HDFS- 497 Field Experience In Human Development And Family Studies (2.00 cr.)

Repeatable: No

Field experience related to human development and family studies skills and knowledge used in teaching wage-earning courses at secondary level.

Department consent

HDFS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HIST – History**HIST- 120 Early United States History (3.00 cr.)
*History, Racial & Ethnic Studies Category B***

Repeatable: No

U.S. history to 1865: political, economic and social forces that have shaped the nation to close of Civil War.

HIST- 121 Modern United States History (3.00 cr.)***History, Racial & Ethnic Studies Category B, Global Perspective***

Repeatable: No

U.S. history since 1865: political, economic and social forces that have shaped the nation since close of Civil War.

HIST- 130 Greeks, Romans, and Barbarians: Use and Misuse of Global Pasts (3.00 cr.)

History, Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

A look at real histories of ancient Greece, Rome, and the so-called barbarian kingdoms that succeeded them to better understand the use and misuse of history in American popular culture today. A comparison of the myths, art, philosophy, magic, religion, and politics of the ancients with their contemporary portrayals in film, news, social media, advertising, and politics.

HIST- 140 Western Civilization (3.00 cr.)

History

Repeatable: No

Survey of Western civilization along the Nile, the Fertile Crescent, through Greece, Rome, the Middle Ages, the Renaissance, and the Reformation.

HIST- 141 Western Civilization (3.00 cr.)

History

Repeatable: No

Survey of Western civilization from Reformation to present.

HIST- 196 Origins Of Current World Conflicts (3.00 cr.)

Humanities and the Arts - History

Repeatable: No

Three or four topics selected from the following: Middle East, Russia-China, Yugoslavia, Poland, Northern Ireland, and other areas of present or future conflict. Emphasis on past national, religious, economic, and social developments as they relate to the present.

HIST- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HIST- 210 Modern World (3.00 cr.)

History, Global Perspective

Repeatable: No

Modern trends in terms of historical backgrounds as frame of reference for interpreting modern world.

HIST- 221 Wisconsin State History (3.00 cr.)

Racial & Ethnic Studies Category B, Social Responsibility and Ethical Reasoning

Repeatable: No

Wisconsin history from pre-contact through the present with emphasis on settlement by American Indians, economic changes, sports and outdoor recreation, politics and politicians, and the development of an challenges to the Wisconsin Idea. Must be Sophomore level or higher

HIST- 240 History and Politics of Africa (3.00 cr.)

Contemporary Issues, Global Perspective, Humanities and the Arts - History, Social and Behavioral Sciences - Political Science

Repeatable: No

Familiarity with cultures and civilizations of Africa, historical roots of modern situations. Emergence of human culture; traditional societies; colonialism and racism; regional persistence; independence and development; civil war and ethnic conflict; participation in a global economy.

HIST- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

HIST- 290 Words, Images, Sounds and the Projection of Global Culture (3.00 cr.)

History, Contemporary Issues, Global Perspective

Repeatable: No

Ways in which traditional historical and anthropological formats have been impacted by new forms of visual media. An appreciation of new techniques in historical and anthropological analysis and practical experience in multimedia presentations of important global questions.

HIST- 296 Women And Gender In Europe: 1750 To Present (3.00 cr.)

Global Perspective, Humanities and the Arts - History

Repeatable: No

History of women and gender ideas in Western Europe and the changing status of women in European society. Using writings by and about women, explore how women's identities were shaped and how they sought to gain greater access to political, social, and economic equality.

HIST- 296C Women's History: Comparative U.S. and the U.K. (3.00 cr.)

Global Perspective, Humanities and the Arts - History

Repeatable: No

Provides essential understanding of U.S. women's history from 1900-1950 in comparison to women of the United Kingdom. Special focus on economics, social, cultural and political development. Offered only through the Wisconsin in Scotland program.

Department consent

HIST- 296D History of U.S. Civil Rights movement and the World Reaction (3.00 cr.)

Global Perspective, Humanities and the Arts - History

Repeatable: No

The United States civil rights movement from 1940 to 2008, examining the movement itself and the world reaction to the U.S., drawing on social policy, political activities, sociology and social history with an emphasis on aspects of the struggle for minority groups. Offered only through the Wisconsin in Scotland program.

Department consent

HIST- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HIST- 310 Sexualities in Historical and Social Perspective (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category B

Repeatable: No

Sociology and history of sexual identities and categories and their uses to justify public policy; the normative and institutional context of how power is exercised in relation to sexuality, especially the stratification of society based on sexuality. Contemporary controversies such as gay marriage and other civil rights issues. Must be Sophomore level or higher

HIST- 311 Women And War: A Global Perspective In The Modern Era (3.00 cr.)

History, Global Perspective

Repeatable: No

Examines the lives and roles of women in conflicts from 1789 to the present during wars in Europe, Africa, Asia, and Latin America with minor focus on the United States.

HIST- 321 United States Women's History (3.00 cr.)

History, Racial & Ethnic Studies Category B

Repeatable: No

Political, economic, and social contributions of women to United States history. Examination of the historical interaction of ethnicity, class, and sexual orientation with gender. Strong focus on the changes in gender expectations and the historical creation of stereotypes and inequality.

HIST- 322 African-American History (3.00 cr.)

History, Racial & Ethnic Studies Category A

Repeatable: No

Social, cultural, economic and political history of African-Americans, with special focus on the United States.

HIST- 323 American Immigration and Ethnic History (3.00 cr.)

History, Racial & Ethnic Studies Category A, Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

American immigration and ethnic history from the nation's colonial roots to the present. Conceptualization of immigration and ethnicity in historical perspective; the immigration experience; interaction with and responses of the established native populations to the arrival of diverse others; continuing issues of immigration and ethnicity in a historical perspective. Must be Junior level or higher

HIST- 324 United States Labor History (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category B, Social Responsibility and Ethical Reasoning

Repeatable: No

Evolution of work and the changing circumstances of workers in the U.S.: First Industrial Revolution through the 1990s; analysis of race/ethnicity and gender in the rise of unions, the creation of the managerial class, communes, agriculture, technology, and the

service sector. Exploration of the ethics of labor rights in a democracy and limitations on "free" labor.

Must be Sophomore level or higher

HIST- 325 History of American Indians (3.00 cr.)

Racial & Ethnic Studies Category A, Social Responsibility and Ethical Reasoning

Repeatable: No

American Indian history with emphasis on areas that become the U.S., from pre-contact through the 20th century. Topics include origins, the history and ethics of encounters with colonists, treaties, resistance of U.S. encroachment, land and resource control, identity politics, and appropriation of Indian symbols, objects, culture, and history.

Must be Sophomore level or higher

HIST- 330 History Of World War II (3.00 cr.)

History, Global Perspective

Repeatable: No

Causes, conduct and effects of World War II.

HIST- 335 World War II: An Ethnic And Global History (3.00 cr.)

History, Racial & Ethnic Studies Category B, Global Perspective

Repeatable: No

Examine World War II through exploration of ethnicity and race both in the United States and abroad.

Must be Sophomore level or higher

HIST- 340 Mixed-Heritage History of the Americas (3.00 cr.)

Racial & Ethnic Studies Category A, Social Responsibility and Ethical Reasoning

Repeatable: No

Examine and analyze mixed-heritage history in the Americas, especially as it relates to the development of historically contingent ethnic and racial categories during colonial and national periods, the ethics and policing of those categories, and the mediation of "authentic" identity in historical context.

Must be Sophomore level or higher

HIST- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

HIST- 350 History Of The Vietnam War (3.00 cr.)

History

Repeatable: No

American role in the Vietnam War, particularly goals, objectives and dilemmas faced by American policymakers; roles and contributions of American men and women in the military and in civilian society; development and impact of the anti-war movement; and long-term consequences of the war on American culture and society.

HIST- 360 Asian History (3.00 cr.)

History

Repeatable: No

Survey of political, social, religious and economic history of Asia, India, China, Japan and the Philippines in modern world.

HIST- 377 History of Ideas in the Twentieth Century (3.00 cr.)

Global Perspective, Humanities and the Arts - History, Social Responsibility and Ethical Reasoning

Repeatable: No

Technology and mechanical production processes effects on world outlook. Historical survey of important twentieth-century thinkers in film, literature, psychology, physics, and philosophy who have assessed the impact of technology on individuality, creativity, and our potential for ethical engagement around the globe.

HIST- 380 Latin American History (3.00 cr.)

History

Repeatable: No

Political, social and economic history of Middle and South America, pre-Columbian to present.

HIST- 390 Modern History of Science and Technology (3.00 cr.)

Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Examines a global history of science and technology. Themes include: scientific theories and methods within their intellectual contexts; relationships between science, technology, and society; interactions between cultural groups (Western; non-Western) as impacted by science and technology; impacts of science and technology on race, gender, and other groups.

HIST- 391 History of Social Science (3.00 cr.)

History, Racial & Ethnic Studies Category B

Repeatable: No

History of social science and its applications. Themes include development of research methods; relationships between knowledge and applications; behavioral and normative diversity between cultures; changing beliefs about "human nature," race and ethnicity, and other group categories.

HIST- 392 History of Mad Science (3.00 cr.)

History, Social Responsibility and Ethical Reasoning

Repeatable: No

Moral execution of scientific methods by exploring important cases of wrongdoing. Themes include ethical responsibilities at each step in the scientific process; examples of misbehavior in the history of science; recent examples of controversial research; contemporary strategies for preventing unethical science.

HIST- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HIST- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain

business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

HIST- 460 History Methods (2.00 cr.)

Repeatable: No

Historiography and application of the historical method, including the study of teaching methods, instructional materials, and evaluation techniques.

History minors only

HIST- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HLTED – Health Education

HLTED- 360 Personal Health And Fitness (3.00 cr.)

Repeatable: No

Analysis of consequences of individual decisions and lifestyle choices related to personal health and well-being.

HLTED- 375 Methods In Health, Wellness and Fitness (3.00 cr.)

Repeatable: No

Health education teaching methods, teaching health related concepts: stress management, cardiovascular fitness, nutrition, and physical testing.

HLTED- 376 Organization And Administration Of Health Education (3.00 cr.)

Repeatable: No

Planning, promoting, and implementing comprehensive health education programs at the elementary, middle, and secondary levels. Needs assessment; curriculum development and coordination; public relations; and the development of cooperative relationships with parents, private business, and voluntary and community health agencies.

Department consent

HLTED- 485 Health Education Student Teaching (2.00 cr.)

Repeatable: No

Directed teaching and community experiences in selected off-campus schools.

Department consent

HLTH – Health

HLTH- 101 Discovering Wellness (1.00 cr.)

Health and Physical Education - Health

Repeatable: No

Introduction to the components and benefits of high level wellness; includes self-assessment and the development of an action plan for lifetime wellness.

HLTH- 196 Discovering Wellness (3.00 cr.)

Health and Physical Education - Health

Repeatable: No

Analysis of consequences of personal decisions and personal lifestyle choices related to personal health and well-being. Techniques employed in the promotion of health information, services and products. Focuses on the needs of pre-professional elementary and secondary education students in Scotland.

HLTH- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HLTH- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entailing recurring, supervised work periods, each one building and expanding on the previous.

Department consent

HLTH- 296 Basic Life Support And CPR (1.00 cr.)

Health and Physical Education - Health

Repeatable: No

Correct techniques according to American Red Cross to provide heartbeat and breathing in victims of cardiac arrest by means of external check compression and mouth-to-mouth resuscitation. Upon successful completion, students will be certified by the American Red Cross in community CPR.

HLTH- 296B Contemporary Health Issues (3.00 cr.)

Global Perspective

Repeatable: No

Exploration and analysis of contemporary health trends in the U.S., U.K., and globally. The implications for the individual, family, community, and society will be explored. Emphasis is placed on the prevention of health problems through the thoughtful examination of ethical issues and exercising of personal responsibility relative to lifestyle choices.

HLTH- 296C Stress Management (3.00 cr.)

Global Perspective

Repeatable: No

Students observe and identify environments and behaviors of Scottish people compared to their home environments. Students identify risky and health behaviors in Scotland compared to the U.S. Two questions will be answered: how do we learn to manage stress to achieve optimal wellness, and is stress a global epidemic?

HLTH- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HLTH- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring,

supervised work periods, each one building and expanding on the previous.

Department consent

HLTH- 350 Prevention And Care Of Athletic Injuries (3.00 cr.)

Repeatable: No

Provides prospective physical education and/or coaching professional with basic understanding of prevention, treatment and care of athletic injuries.

Prerequisites: take HWF-340 and BIO-234

HLTH- 355 Kinesiology (3.00 cr.)

Repeatable: No

Body movements and principles affecting them.

Prerequisite: take BIO-132

HLTH- 365 Physiology Of Exercise (3.00 cr.)

Repeatable: No

Effects of exercise on sports participants: heat stress, body composition, nutrition, cardiovascular function, energy expenditure, respiratory mechanics and ventilation factors.

Prerequisite: take BIO-132

HLTH- 396 Wellness: A Personal Choice (3.00 cr.)

Health and Physical Education - Health

Repeatable: No

Consequences of personal decisions and personal lifestyle choices related to personal health and well-being. Focuses on needs of elementary and secondary school teachers.

HLTH- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HLTH- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

HLTH- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HT – Hospitality and Tourism

HT- 100 Introduction To Hospitality (2.00 cr.)

Global Perspective

Repeatable: No

Exploration of the major components and organization structure of the hospitality industry. Presents historical development, opportunities and current trends. Stresses the importance and relationship of education and work experience to career success.

Examination of the key components in various industry sectors

including food service, lodging, tourism, gaming, and property management.

HT- 121 Principles Of Foodservice Operations (2.00 cr.)

Repeatable: No

Professional segments of foodservice operations: history, types of operations, functions, facilities design, equipment, basic cooking principles, dining room service, and management concepts.

HT- 140 Principles Of Tourism (3.00 cr.)

Global Perspective

Repeatable: No

Scope, structure, and function of tourism as an industry and a sociocultural phenomenon; industry components and the importance of maximizing costs to its stakeholders.

HT- 149 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department consent

HT- 150 Institutional Food Purchasing (2.00 cr.)

Repeatable: No

Methods of large-quantity food purchasing: determining standards, specific needs and industrial offerings; formulating specifications, buying procedures and controls.

HT- 200 Hospitality Organization Management (3.00 cr.)

Repeatable: No

Management principles for hotels and restaurants, supervisory development and training, labor relations, managerial interpretation and evaluation of current systems and procedures.

Prerequisite: take HT-100

HT- 235 Lodging Systems (3.00 cr.)

Repeatable: No

Examination of the basic skills needed in a lodging facility. Specific roles, functions, and policies pertaining to the Rooms Division.

Must be Sophomore level or higher

HT- 240 Tourism Goods And Services (3.00 cr.)

Global Perspective

Repeatable: No

Analysis of tourism goods and services in relationship to future patterns of supply and demand.

Prerequisites: take HT-140 and ECON-210

HT- 249 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department consent

HT- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HT- 315 Gaming Management (3.00 cr.)

Repeatable: No

Overview of casino gaming operations in the Hospitality and Tourism industry from a global and local perspective. A special course fee applies.

HT- 316 Casino Operations Management (3.00 cr.)

Repeatable: No

Functions and transactions associated with the gaming operations environment within a resort casino.

HT- 317 Psychosocial Issues In Gaming (3.00 cr.)

Repeatable: No

A hospitality management and societal perspective of the pros and cons of gambling entertainment.

Must be Junior level or higher

HT- 323 Food Service Equipment (2.00 cr.)

Repeatable: No

Factors affecting design, selection, physical facilities and utilities involved in foodservice equipment.

HT- 324 Quantity Food Production (3.00 cr.)

Repeatable: No

Quantity food production management concepts; menu planning, work production schedules, production analysis, food and labor cost controls, and sales projections, crisis and service management techniques; lab work in quantity food production and service; recipe development and introduction to productivity and work simplification concepts.

Prerequisites: Take HT-121 and FN-115 and FN-215, or take FN-124 and FN-240

HT- 326 Introduction To Wines And Spirits (3.00 cr.)

Global Perspective

Repeatable: No

Applied and historical knowledge of wines and spirits from different regions of the world; emphasis on preparation, selection, accompaniment with food, basic cost control analysis and service. A special course fee applies.

Must be 21 years of age or older

HT- 330 Resort Planning And Operation (3.00 cr.)

Repeatable: No

Planning and operation of individual destination resorts. Analysis of resort concept, history, master planning, environmental impact, facility design, maintenance and operational management.

HT- 335 Lodging Operations Management (3.00 cr.)

Repeatable: No

Investigation of supervisory roles in lodging management, with an emphasis on the importance of financial statements and their

interpretation, human resources and productivity, and providing quality hospitality services within all types of lodging facilities.

Prerequisites: take HT-135

HT- 340 Development Of Tourism Attractions (3.00 cr.)

Repeatable: No

Diversified natural and man-made background tourism elements (BTE): preservation and incorporation of concepts for development of tourism destinations.

Prerequisites: take HT-140 and ECON-210

HT- 344 Hospitality And Tourism Marketing And Sales (3.00 cr.)

Repeatable: No

Analysis of marketing strategy, sales techniques, promotional tools, and research for hospitality and tourism development.

Must be Junior level or higher

HT- 349 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department consent

HT- 350 Hospitality Diversity Management (3.00 cr.)

Racial & Ethnic Studies Category B

Repeatable: No

Analysis of multiculturalism and diversity in the hotel, restaurant and tourism workplace. Managing a diverse workforce in a logical and meaningful manner through understanding self-perspectives, group identities, and workplace strategies.

Must be Junior level or higher

HT- 351 Hospitality Convention/Meeting Planning (3.00 cr.)

Repeatable: No

The roles and responsibilities of professional hospitality meeting planners and hotel convention sales/service managers are examined for purposes of planning or hosting a major convention, or a corporate, association, or special group meeting event.

Prerequisite: take HT-344

HT- 352 Club Management (3.00 cr.)

Repeatable: No

Managing a membership, city, health and fitness, military, golf, or other social or recreation club.

Must be Junior level or higher

HT- 360 Tourism For Persons With Disabilities (3.00 cr.)

Repeatable: No

Examination of the effectiveness of current legislation and initial strategies to purposely accommodate the needs and preferences of persons with disabilities to promote a more inclusive environment within the hospitality and tourism industry.

HT- 362 Foodservice Finance And Cost Control (3.00 cr.)

Repeatable: No

The use of financial techniques and systems to develop and analyze budgets, control food, beverage, and labor costs in foodservice operations.

Prerequisite: take BUACT-206

HT- 374 Principles Of Timeshare Management (3.00 cr.)

Repeatable: No

Introduction to timeshare management; similarities and differences between timeshare operations and other hospitality businesses.

Tourism influences on timeshare development.

HT- 383 Yield Management (3.00 cr.)

Repeatable: No

Investigation of the use of computer technology in the lodging industry for revenue planning, scheduling and performance evaluation. Specialized software will be used to analyze and evaluate hotel performance.

Prerequisites: take HT-135, HT-200 and STAT-130

HT- 391 Principles of Social Media Marketing Management (3.00 cr.)

Repeatable: No

Review of social media marketing management and the impacts that social media has on marketing strategy, operational strategies, social technology business models, how the conversation economy impacts business, internal and external engagement practices, customer service and reputation management, along with privacy and legal considerations.

Prerequisites: take HT-344 or BUMKG-330

HT- 396 Workshop In Recreation And Parks: Scotland's Public Spaces (3.00 cr.)

Repeatable: No

Introduction to wide range of public spaces and recreational facilities across Scotland and their use, such as public squares, botanical gardens, arboretums, and historical museums. Critical analysis of the site is introduced to determine whether the space was successfully designed to meet the needs of users.

HT- 396A Social Media Marketing Management (3.00 cr.)

Repeatable: No

Social media marketing practices and management of the social media process. Focused on business models within social marketing, customer change impacting unit practices, social platform effectiveness, customer service and engagement, applications within hospitality and related services, privacy and legal considerations. Must be Sophomore level or higher

HT- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HT- 418 Casino Tourism (3.00 cr.)

Repeatable: No

Research/travel and visits with Chambers of Commerce, casino management personnel, and governing entities to study economic,

sociological and cultural impacts of gaming within a particular global or local region. A special course fee applies.

Prerequisites: take HT-315, HT-316, and HT-317

HT- 423 Wine And Food Pairing (4.00 cr.)

Global Perspective

Repeatable: No

Matching wine and food from different parts of the world using flavors, textures, and components present in food and wine as complementing strategies. Emphasis on menu planning, food preparation, cooking methods and wine tasting with foods. A special course fee applies.

Prerequisite: take HT-326

HT- 426 Restaurant Operational Management (3.00 cr.)

Repeatable: No

Application of the principles of food and beverage management in full service restaurants existing as independent units or as units within a commercial/ noncommercial foodservice operation. The course will emphasize fine dining, fine cuisine and control systems.

Prerequisite: take HT-324

HT- 430 Lodging Administration (3.00 cr.)

Repeatable: No

Analysis of theories, principles and techniques of lodging management; problems and issues encountered by management in providing quality service within cost-efficient organization.

Prerequisite: Senior level and HT-383

HT- 440 Sociocultural Systems Of Tourism (3.00 cr.)

Repeatable: No

Various psychosocial dimensions of tourism: motivation, development, community and conflict as related to consumer-tourists, tourists and residents.

Must be Senior level or higher

HT- 442 Trade Show Management (3.00 cr.)

Repeatable: No

Investigate and apply the process and procedures to plan and manage a trade show from a developer and user perspective. Define the process to select and develop, arrange for site and support services leading to a profitable trade show.

Prerequisite: take HT-351

HT- 445 Event Management (3.00 cr.)

Repeatable: No

Planning, organizing and the management of events will be investigated for the hospitality, tourism and golf industries. Emphasis is placed on the design, internal management systems and post event evaluation.

HT- 447 International Convention And Meeting Management (3.00 cr.)

Repeatable: No

Investigate the process and procedures to plan for meetings in other countries.

Prerequisite: take HT-351

HT- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department consent

Must be Junior level or higher

HT- 450 Food Service Administration (3.00 cr.)

Repeatable: No

Organization and administration of institutional foodservice systems, personnel selection and training, cost control and problems of supervision.

HT- 452 Hospitality Professionalism (2.00 cr.)

Repeatable: No

Prepare hotel, restaurant and tourism students as professionals in a global community. Role-play emphasis on professional dress, dining etiquette, culture and business conversation, job search and placement techniques.

HRTM or Property Management Majors only

HT- 454 Security And Risk Management For The Hospitality Industry (3.00 cr.)

Repeatable: No

Advanced investigation of security and risk management within hospitality/service industries.

HT- 457 Hospitality Management Strategies (3.00 cr.)

Repeatable: No

Comparison and synthesis of hospitality management strategies; concepts and theories in relationship to long-term hospitality business goals and objectives. Capstone course for senior-level H&T students.

Prerequisite: Must be Senior level and take HT-362

HT- 460 Hospitality Industry Law And Liability (3.00 cr.)

Repeatable: No

Laws applicable to ownership and operation of inns, hotels, motels, restaurants and other places of public hospitality.

HT- 461 Hospitality Employee Relations (3.00 cr.)

Repeatable: No

History and legal strategies and tactics in dealing with hospitality employees in both union and non-union settings.

HT- 481 Special Problems In Hospitality And Tourism (1.00 - 3.00 cr.)

Repeatable: Yes

HT- 492 Seminar In Hospitality And Tourism Management (3.00 cr.)

Repeatable: Yes

An advanced course in management. The student will select and research a current topic of importance to the industry. A special course fee applies.

HT- 498 Hospitality & Tourism Field Experience (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand the challenges and potentials of various careers in the hospitality area.

Department consent

Must be Senior level or higher

HT- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

HWF – Health, Wellness and Fitness**HWF- 100 Introduction to Health, Wellness & Fitness Industry** (2.00 cr.)

Repeatable: No

Exploration of the major components, systems, and processes of the health, wellness, and fitness industry. Examination of past and present trends and key components in various industry sectors.

Advisement on course sequence, field experience and career opportunities.

HWF- 275 Lifespan Health, Wellness and Fitness (3.00 cr.)

Repeatable: No

Understanding the importance of a healthy lifestyle throughout the lifespan. Examination of health, history, medications, culture, ages, lifestyles, predisposed health conditions, injury/physical challenges, and the individual's goals/objectives.

HWF- 322 Fitness Assessment (2.00 cr.)

Repeatable: No

Fitness evaluation theory and practice.

Prerequisites: take BIO-234

HWF- 340 Community CPR, Automatic External Defibrillation and First Aid (3.00 cr.)***Social Responsibility and Ethical Reasoning***

Repeatable: No

American Red Cross Certification - Adult, child and infant CPR, automated external defibrillator use, first aid; personal safety, accident prevention knowledge; sudden illness recognition; respond/administer emergency techniques; social responsibility, ethical reasoning, first aid and emergency situations. A special course fee applies.

HWF- 348 Stress Assessment and Intervention (3.00 cr.)

Repeatable: No

Theory and methods related to stress interpretation, recognition and intervention. Developing skills necessary for identifying stressors and applying appropriate intervention techniques that will lead to a healthy lifestyle. Designing prescription plans for individual and groups.

HWF- 370 Personal and Group Exercise: Theory and Methods (3.00 cr.)

Repeatable: No

Theory and methods related to personal and group fitness.

Developing skills necessary for teaching fitness classes in various settings. Designing prescription plans for individuals and groups.

Current and past fitness trends.

HWF- 390 Recreational Facilities Management and Leadership (3.00 cr.)

Repeatable: No

Basic methods, concepts, and procedures of planning, programming, budgeting, project management, and operations management.

Theories and principles of personal, managerial, and administrative leadership in recreational services; identification of policies, health and emergency procedures, and contingency plans for the operation of recreational leagues and tournaments.

Prerequisites: Take BUMGT-304

HWF- 398 Field Experience in Health, Wellness and Fitness (1.00 cr.)

Repeatable: No

Work and study in an approved health, wellness or fitness position.

Students will work under supervision in this experience. Minimum of 160 contact hours.

Department consent

HWF- 418 Administration of Strength Training and Conditioning (4.00 cr.)

Repeatable: No

Exercise science and its application to program design, implementation, and evaluations. Preparation for the National Strength and Conditioning Association (NSCA) and the Certified Strength and Conditioning Specialist (CSCS) examinations.

Prerequisites: take BIO-234

HWF- 498 Advanced Field Experience in Health, Wellness and Fitness (1.00 - 3.00 cr.)

Repeatable: Yes

Work and study in an approved health, wellness or fitness position.

Students will work with supervision in this experience. Minimum of 320 contact hours.

Department consent

ICT – Information and Communication Technologies**ICT- 100 Introduction to Information and Communication Technologies** (1.00 cr.)

Repeatable: No

Survey of changes, challenges, opportunities in business and industry for the information and communication technologies professional. Program advisement, course sequence, career pathways and job opportunities. B.S. in Information and Communication Technologies majors only.

B.S. in Information and Communication Technologies majors only

ICT- 103 Information and Communication Technologies (3.00 cr.)
Contemporary Issues, Global Perspective

Repeatable: No

Basic technical concepts, principles, models, management and foundational logic of information and communication technologies (ICT). Examines history, current trends and future of ICT. Review of global ICT standards and regulations. Use of contemporary digital ICT for personal, educational and professional growth.

ICT- 215 Cybertechnology Ethics (3.00 cr.)

Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Cyberethics issues, framework for ethic complexities and nuances with information-technology globally including privacy, crime intellectual property, and internet regulation.

ICT- 303 Information & Communication Technologies Essentials (3.00 cr.)

Repeatable: No

Components of computer hardware and operating systems, assembling a computer system, installing an operating system in a computer, and troubleshooting a computer using system tools and diagnostic software.

Prerequisite: take ICT-103

ICT- 305 Information Systems for Enterprise (3.00 cr.)

Repeatable: No

Information systems concepts and technology for contemporary enterprise. Includes hardware, software, networks and enterprise-specific information systems. Emphasis on business-prudent solutions/products based on clearly identified needs/goals.

Prerequisite: take ICT-103

ICT- 309 Collaborative Computing (3.00 cr.)

Repeatable: No

History application, design and analysis of collaborative computing.

Prerequisite: take ICT-103

ICT- 311 Information and Communication Technologies Analytics (3.00 cr.)

Repeatable: No

Determine the value of electronic information and communications, developing metrics, determining return on investment on information and communication technologies.

Prerequisite: take ICT-103

ICT- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ICT- 360 Introduction To Media In Education And Training (2.00 cr.)

Repeatable: No

Use of media in education and training. Includes the production of media and instructional materials in print, video, computer-bases and multimedia formats.

ICT- 370 Computer-Assisted Interactive Video (3.00 cr.)

Repeatable: No

Design, production and evaluation of interactive video applications. Analysis of various hardware \and software systems.

Instructor's consent

ICT- 375 Web Production and Distribution (3.00 cr.)

Repeatable: No

Production and distribution of content to the World Wide Web. Consideration given to basic information architecture, standards, best practices, technologies, planning, implementation, management and distribution of digital content.

Prerequisite: take either ICT-103 or CMG-151

ICT- 400 Workshop (1.00 - 3.00 cr.)

Repeatable: Yes

Special topics in media technology providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

ICT- 401 Information Technology Policy And Audit (3.00 cr.)

Global Perspective

Repeatable: No

Information technology policy, regulatory and audit issues, international standards, and internal security strategies.

Prerequisites: take ICT-305 and BUACT-206

ICT- 405 Enterprise Technology Seminar (3.00 cr.)

Repeatable: No

Trends in enterprise technology, including: systematic development processes to solve business problems and support business processes, identification and use of contemporary enterprise technology solutions, sources of enterprise technology support, training and information and enterprise technology credentialing and career opportunities.

Prerequisite: take ICT-401

ICT- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ICT- 475 Dynamic Web Technologies (3.00 cr.)

Repeatable: No

Contemporary applications of technologies affecting adaptive user-centered web development as pertaining to content, presentation, scripting, variable data, markup languages, information architecture and analytics.

Prerequisite: take ICT-375

ICT- 485 Search Engine Optimization (3.00 cr.)

Repeatable: No

Contemporary application of strategies and technology related to

the improvement of placement in search engine and other relevant search results.

Prerequisite: take ICT-375

ICT- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

INMGT – Industrial Management

INMGT- 100 Introduction To Management (1.00 cr.)

Repeatable: No

Survey of management focusing on changes, challenges, opportunities, and management's role in business and industry. Management program advisement, course sequence and job opportunities.

For B.S. in Management majors only.

INMGT- 120 Quality Concepts (3.00 cr.)

Repeatable: No

An introduction to quality, quality systems, and quality management through a survey of the various philosophies, principles, techniques and procedures used by various organizations and/or managers to assure customer satisfaction of product and/or service.

INMGT- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

INMGT- 200 Production And Operations Management (3.00 cr.)

Repeatable: No

A broad analytical "systems" viewpoint is used to develop competency in product and services operations management decision-making and problem solving in a contemporary setting.

Prerequisites: take STAT-130, STAT-320 or STAT-330

INMGT- 210 Service Operations Management (3.00 cr.)

Repeatable: No

Examination of the environment in which services operate. The design of service delivery systems is addressed from the perspective of both customer participation and operations efficiency.

INMGT- 220 Service Quality Assurance (3.00 cr.)

Repeatable: No

Determination of goals, management systems, and implementation methodologies for all aspects of service organization quality assurance.

INMGT- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring,

supervised work periods, each one building and expanding on the previous.

Department consent

INMGT- 298 Field Experience (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand business and industrial concepts and practices.

Department consent

INMGT- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

INMGT- 300 Engineering Economy (2.00 - 3.00 cr.)

Repeatable: No

Source and application of funds: cost control, valuation, depreciation, replacement theory and taxation.

INMGT- 301 Seminar (1.00 - 2.00 cr.)

Repeatable: Yes

(Title will reflect specific business or management content.) Current topics in business and industrial management to meet specific needs of students enrolled.

INMGT- 302 Seminar (1.00 cr.)

Repeatable: No

Elements of time management, strategies and techniques in industrial and business environments. Analysis of time use by all levels of management.

INMGT- 303 Introduction to Leadership Praxis (1.00 cr.)

Repeatable: No

Assessment of leadership skills/characteristics, leading to understanding of integrative leadership, and including increased capacity for civic engagement, social justice action, and ethical decision making.

INMGT- 305 Resource Planning And Materials Management (3.00 cr.)

Repeatable: No

Principles and techniques for planning and managing materials and resources within organizations and throughout a supply chain. topics covered include resource and material planning, forecasting, master planning, materials requirements planning, capacity management, purchasing, inventory management, distribution options, supply chain management, and various operational management techniques.

Prerequisites: take INMGT-200, STAT-130, or STAT-320

INMGT- 314 Manufacturing Enterprise Practicum (3.00 cr.)

Repeatable: No

Creation, planning, organizing, directing, staffing and controlling of a value-added manufacturing enterprise, including supply chain management; manufacturing, marketing and distribution of a product.

INMG- 320 Quality Tools (3.00 cr.)

Repeatable: No

Practical and statistical quality control in design and use of Quality Assurance Programs: Quality Engineering, Manufacturing Quality Assurance and Product Quality Assurance.

Prerequisite: take STAT-130

INMG- 325 Quality Management (3.00 cr.)

Repeatable: No

Provides the managerial and technical knowledge necessary to prepare, document, manage, and evaluate quality systems from beginning design through system operation and post-delivery customer services within a product or service environment.

Prerequisite: take INMG-200 or INMG-210 or INMG-335

INMG- 335 Lean Manufacturing Systems (4.00 cr.)***Global Perspective***

Repeatable: No

Introduction to production/operations management and lean manufacturing system design for engineers. Emphasis is given to analysis and design of production systems, facility layout, and globalization.

Prerequisite: take STAT-330

INMG- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

INMG- 350 Facilities Planning (3.00 cr.)

Repeatable: No

Study of facilities location, structure, and planning for efficient layout and material handling systems.

Prerequisite: take INMG-200

INMG- 365 Project Management (3.00 cr.)

Repeatable: No

Planning, scheduling, and control of technical projects. topics covered include activity identification, network diagrams, scheduling, PERT/CPM, cost analysis, resource management, and computer control.

INMG- 397 Field Experience (1.00 cr.)

Repeatable: No

Department consent

INMG- 398 Field Experience (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand business and industrial concepts and practices.

Department consent

INMG- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

INMG- 400 Organizational Leadership (3.00 cr.)

Repeatable: No

Addresses the leader's role in accomplishing organizational objectives through the management and development of followers.

Concepts of organizational and individual behavior serve as a foundation for the development of leadership skills such as communication, motivation, leading, team building, building credibility, and conflict management.

Must be Senior level or higher

INMG- 403 Leadership Praxis (1.00 cr.)

Repeatable: No

Synthesis of leadership skills/characteristics, leading to understanding of integrative leadership, and including increased capacity for civic engagement, social justice action, and ethical decision making.

Prerequisites: Take INMG-303

INMG- 405 Resource Planning And Materials Management Practicum (3.00 cr.)

Repeatable: No

Provides students with specific skills in managerial techniques for planning, scheduling and controlling resources in manufacturing and service organizations. This course focuses on the first two of the five required APICS exams that lead to certification as a Certified in Production and Inventory Manager (CPIM).

Prerequisite: take INMG-305

INMG- 410 Six Sigma Quality Improvement Methods (3.00 cr.)

Repeatable: No

Overview of Six Sigma quality improvement applications. Application of scientific methods to improve quality of products, service, processes, and management systems.

Prerequisites: take INMG-320 and INMG-325

INMG- 414 Leadership Practicum (1.00 cr.)

Repeatable: No

Practical application of leadership principles in an enterprise.

Instructor's consent

Prerequisites: Must be concurrently enrolled in INMG-314 and obtain consent of instructor.

INMG- 415 Inclusivity in Leadership (3.00 cr.)***Racial & Ethnic Studies Category B***

Repeatable: No

An examination of leadership dynamics for but not limited to women, people of color and other underrepresented populations including approaches to leading, communicating, and developing inclusive organizations.

Prerequisites: take SOC-110 and either INMG-400 or BUMGT-304

INMG- 416 People Process Culture (3.00 cr.)

Repeatable: No

A study of high performing people process culture organizations integrating sociology, applied psychology, and organization behavior subject matter areas.

Prerequisites: take BUMGT-304, and take either PSYC-382 or INMGT-400

INMGT- 420 Quality Assurance--Practicum (3.00 cr.)

Repeatable: No

Application of principles and techniques learned in INMGT-320, as part of Professional Semester/ Manufacturing Laboratory.

Prerequisites: take INMGT-320 and INMGT-325

INMGT- 422 Quality Engineering (3.00 cr.)

Repeatable: No

Practical and statistical engineering methods to improve quality and design in a manufacturing environment.

STAT-330 or higher level Statistics

INMGT- 425 Planned Experimentation For Quality Improvement (3.00 cr.)

Repeatable: No

Quality improvement through planned experimentation that focuses on product realization activities which consist of new product design and formulation, manufacturing process development and improvement.

Prerequisite: take INMGT-422

INMGT- 430 Employee Involvement: Work Teams (2.00 cr.)

Repeatable: No

Background and history of employee involvement, teams as a method of employee involvement, analysis of the advantages and disadvantages of different team structures and the planning processes used to implement team structures, analysis of situational variables used to help design the best team approach for an organization, the support systems needed to maintain teams, phases of team development, facilitation skills, and team problem-solving methods.

Must be Senior level or higher

INMGT- 435 Facilities and Material Handling Systems Design (2.00 cr.)

Repeatable: No

Lean manufacturing facility design for engineers. Emphasis is given to product flow data collection and analysis, design of production systems, material handling systems, facility layout, and globalization.

INMGT- 440 Lean Enterprise (3.00 cr.)

Repeatable: No

Principles of lean techniques, justification of lean systems, how lean systems are scheduled, and cost analysis of a lean environment.

Prerequisite: take INMGT-200

INMGT- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the

previous.

Department consent

INMGT- 450 Maintenance Management (3.00 cr.)

Repeatable: No

Organization and management of fixed asset maintenance systems including organizational structures, work control systems, computerized maintenance management systems, preventative and predictive maintenance, energy systems analysis and human resource utilization.

INMGT- 460 Industrial Management Capstone (3.00 cr.)

Repeatable: No

Principles and methods of analyzing and solving industrial problems; application through case studies, management games and special problems. Emphasis on emerging techniques and issues in industry.

Must be Senior level or higher

INMGT- 462 Global Manufacturing Study Tour (2.00 - 3.00 cr.)

Global Perspective

Repeatable: No

Visit global sites to understand the current state of product design, manufacturing, and distribution in both developed and developing countries. Learn how to develop supplier, manufacturing, and distribution systems in a global setting.

Must be Senior level or higher

INMGT- 475 Advanced Project Management (3.00 cr.)

Repeatable: No

Advanced planning, control, and leadership of technical projects and programs. topics covered include: project and program justification, project management maturity and methods, multiple project or portfolio management, project management in multinational cultures, virtual project teams, requirements definition, and outsourcing.

Prerequisites: take INMGT-365 or AEC-471

INMGT- 489 Business And Industrial Intern (1.00 - 8.00 cr.)

Repeatable: Yes

Off-campus work and study in student's area of concentration; approved salaried position with cooperating company for a semester or summer session.

Department consent

Must be Junior level or higher

INMGT- 496 Innovation Management (1.00 cr.)

Repeatable: No

Self-paced study on innovation management to determine how to commercialize the student's new product innovation. Topics include intellectual property, market research, prototyping, and business plans.

INMGT- 497 Field Experience (1.00 cr.)

Repeatable: No

Department consent

INMGT- 498 Field Experience (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand business and industrial concepts and practices.

Department consent

INMGT- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ITM – Information and Technology Management

ITM- 133 Networking Fundamentals I (3.00 cr.)

Repeatable: No

Internet Protocol addressing, routing and switching fundamentals.

ITM- 134 Networking Fundamentals II (3.00 cr.)

Repeatable: No

Advanced addressing, switched networks, routing protocols, access lists and wide area network.

Prerequisite: take ITM-133

ITM- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ITM- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ITM- 300 ITM Workshop: VMware Install, Configure, and Manage (3.00 cr.)

Repeatable: No

Installing, configuring, and managing VMware vSphere, including VMware, vSphere, ESXi, and VMware vCenter Server.

Prerequisite: take ITM-133

ITM- 300 Workshop: Voice Mail & Unified Messaging (3.00 cr.)

Repeatable: No

Cisco Unity Connection architecture, components, functionality, and features. Implement and administer Cisco Unity Connection to create a unified workspace encompassing applications, devices, networks, and operating systems. Explore the various administration tools and reports available in Cisco Unity Connection.

ITM- 300 Workshop (1.00 - 3.00 cr.)

Repeatable: Yes

Special topics in graphic communications, providing hands on or

experiential learning activities. Specific content and title to reflect the topic of the workshop.

ITM- 308 Convergence Technologies (3.00 cr.)

Repeatable: No

Creation of single networks that support many different types of traffic: data, audio, video, and interactive multimedia. Planning physical design and installation of a telephone and converged system, requirements of a converged network, and what makes convergence.

Prerequisite: take ICT-103 and ITM-134

ITM- 330 IP Telephony Design & Implementation (3.00 cr.)

Repeatable: No

Internet protocol (IP) telephony components and protocols examination; converged network interpretation; analog and digital voice interface configuration; quality of service configuration; single and multisite IP telephony deployment; IP telephony features implementation.

Prerequisites: take ITM-441

ITM- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ITM- 361 Workstation And Server (3.00 cr.)

Repeatable: No

Installing, configuring, and administering Microsoft Windows utilizing the current commercial version of the product for both workstations and servers. Helps prepare students for two of the Microsoft Certified Systems Engineer (MCSE) certification examinations.

Prerequisite: take ITM-134

ITM- 362 Server Applications (3.00 cr.)

Repeatable: No

Installing, configuring, and administering server applications using multiple industry standard operating systems. Server applications may include World Wide Web, FTP, software updates, mail, file sharing, DNS, DHCP, and terminal services.

Prerequisite: take ITM-361

ITM- 363 Directory Services (3.00 cr.)

Repeatable: No

Provides knowledge and skills to plan, implement, and troubleshoot directory services. Design and implement a secure network. Focuses on a directory services environment, including forest and domain structure, domain name system, site ology and replication, organizational unit structure, and delegation of administrations.

Prerequisite: take ITM-361

ITM- 382 Network Systems Design (3.00 cr.)

Repeatable: No

Concepts from communication networks. LAN, MAN, WAN networks. Introduction to LAN switching, ATM and virtual LANS. Designing and integration of LAN switching virtual networking and ATM into today's networks.
Prerequisite: take ITM-134

ITM- 383 Introduction To Network Security (3.00 cr.)

Repeatable: No

Design, implementation and management of network security in multilayered computer networks. Identifying and evaluating network security threats; internet, intranet, and extranet security issues.

Prerequisite: take ITM-134

ITM- 391 Wireless Systems (3.00 cr.)

Repeatable: No

Wireless networking combining Radio Frequency (RF) and Local Area Networking (LAN) technology fundamentals. Basic concepts and building blocks or the convergence between RF and networking technologies. Technologies and tasks vital to installing, managing, and supporting wireless networks.

Prerequisite: take ITM-134

ITM- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

ITM- 441 Scalable Internetworks (3.00 cr.)

Repeatable: No

One of three core courses for preparation for the Cisco CCNP and CCDP professional certification. Students will learn how to build scalable routable networks. Students are required to pass the associated Cisco certification examination.

Prerequisite: take ITM-134

ITM- 442 Remote Access Networks (3.00 cr.)

Repeatable: No

One of three core courses for preparation for the Cisco CCNP and CCDP professional certification. Students will learn how to build remote access networks to interconnect central sites to branch offices and home offices. Students are required to pass the associated Cisco certification examination.

Prerequisite: take ITM-441

ITM- 443 Multi-Layer Switched Networks (3.00 cr.)

Repeatable: No

One of three core courses for preparation for the Cisco CCNP and CCDP professional certification. Build multi-layer switched networks. Students are required to pass the associated Cisco certification examination.

Prerequisite: take ITM-441

ITM- 444 Internetwork Troubleshooting (3.00 cr.)

Repeatable: No

Specialization course for the Cisco CCNP professional certification. Students will learn to troubleshoot internetworks. Students are required to pass the associated Cisco certification examination.

Prerequisites: Take ITM-441 and ITM-443

ITM- 445 Internetwork Design (3.00 cr.)

Repeatable: No

Specialization course for the Cisco CCNP professional certification. Students will learn to design internetwork solutions. Students are required to pass the associated Cisco certification examination.

Prerequisites: take ITM-441, ITM-442, and ITM-443

ITM- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

ITM- 450 Enterprise Solutions and Unified Communications (3.00 cr.)

Repeatable: No

Enterprise-level network utilizing the technologies and methods that are current industry best practices. Provide enterprise network solutions and unified communications to an organization while maintaining quality of service. New and emerging network technologies for an enterprise network.

Prerequisites: take ITM-330, ITM-363, and ITM-444

ITM- 484 Advanced Network Security and Auditing (3.00 cr.)

Repeatable: No

Network infrastructure, operating systems, data centers, and virtualized environment security and auditing. Information technology government and industry regulation compliance.

Prerequisites: take ITM-363, ITM-383, and ITM-443

ITM- 490 Information Technology Management Capstone (3.00 cr.)

Repeatable: No

Work with an outside organization in a team environment utilizing concepts of design, brainstorming, problem solving, team work, creativity, evaluation, and present findings in oral and written formats.

Prerequisite: Take ITM-450

ITM- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

LIT – Literature

LIT- 203 American Poets (3.00 cr.)

Literature, Racial & Ethnic Studies Category B

Repeatable: No

Poetry of American writers: how culture, race, ethnicity, and nature shape American poetry.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 205 The Short Story (3.00 cr.)

Literature, Contemporary Issues

Repeatable: No

Style, structure, history and development of short story as a literary form.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 208 Fiction Into Film (3.00 cr.)

Literature, Racial & Ethnic Studies Category B

Repeatable: No

A literary and cultural examination of film adaptations. Special attention is given to the evolving depiction of non-dominant racial and ethnic cultural groups in literature and film.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 230 American Cinema (3.00 cr.)

Literature, Contemporary Issues, Racial & Ethnic Studies Category B

Repeatable: No

A literary and cultural examination of American cinematic development. Special attention is given to the evolving depiction of non-dominant cultural groups and contemporary issues.

Examination of these issues allows students to actively discover, assess, and execute the creative problem-solving needed to be fully engaged with contemporary issues.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 255 Recent World Literature (3.00 cr.)

Literature, Global Perspective

Repeatable: No

Selected readings in Contemporary Literature in Translation.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 260 Modern American Literature (3.00 cr.)

Literature, Racial & Ethnic Studies Category B

Repeatable: No

Selected poetry, prose and drama produced since World War I.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 265 Literature and Economics (3.00 cr.)

Literature, Contemporary Issues

Repeatable: No

Exploration of economic concepts and principles in literary works form a variety of periods. Application of literary and economic theory to novel-length texts.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 272 Women Writers (3.00 cr.)

Literature, Racial & Ethnic Studies Category B, Global Perspective

Repeatable: No

Study of representative American and international women writers within the tradition of feminist literary theory.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 273 American Multicultural Literature (3.00 cr.)

Literature, Racial & Ethnic Studies Category A

Repeatable: No

American multicultural literature, focusing on Hispanic, African, Asian, and Native American writers.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 275 Environmental Literature (3.00 cr.)

Literature, Social Responsibility and Ethical Reasoning

Repeatable: No

Literary and critical analysis of environmentalist discourses.

Exploration of literary works that treat land use and co-existence among life forms.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 280 Best-Sellers (3.00 cr.)

Literature

Repeatable: No

Fiction and non-fiction best-sellers: expression of and impact on popular culture.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 281 Recent American Literature: Culture, Race, Ethnicity and Nature (3.00 cr.)

Literature, Racial & Ethnic Studies Category B

Repeatable: No

How culture, race ethnicity, and nature shape American literature.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 285 Science Fiction (3.00 cr.)

Literature

Repeatable: No

Critical survey of popular and classic science fiction.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 300 Children's Literature (3.00 cr.)

Literature, Racial & Ethnic Studies Category B

Repeatable: No

Critical survey and ways of presenting literature for children from infancy to age 12.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 301 English Literature (3.00 cr.)

Literature

Repeatable: No

Selected prose and poetry from 1798 to modern times.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 302 Topics In Literature (1.00 cr.)

Literature

Repeatable: Yes

Intensive analysis of selected authors and literary works with emphasis on discourse analysis in group and workshop settings.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 303 Coming of Age in Literature and Film (3.00 cr.)

Literature, Racial & Ethnic Studies Category B

Repeatable: No

Exploration of literary and filmic works that treat age, coming of age, aging, and old age. Literary and critical analysis using age studies in literature.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 304 American Folklore (3.00 cr.)

Literature, Racial & Ethnic Studies Category B

Repeatable: No

Analysis and interpretation of stories, songs, jokes, and material culture of families, work groups, ethnic groups, and religious groups.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 306 Shakespeare (3.00 cr.)

Literature

Repeatable: No

Several representative plays and selected criticism.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 307 After 9/11: American Literature of Public Crisis and

Trauma (3.00 cr.)

Literature, Contemporary Issues, Racial & Ethnic Studies Category A, Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Literary and cultural analysis of 9/11 and its aftermath in American and global contexts. Exploration of new racial formations, discourses of citizenship in the wake of trauma.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 308 Alice Walker: Beyond Purple (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category A

Repeatable: No

Explore Alice Walker's short stories, poetry, essays, children's literature, and novels. Consider Walker's writing in its social and historical contexts, particularly the civil rights, anti-Viet Nam war, and women's liberation movements, and connect those themes to contemporary issues.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 350 Modern British Literature (3.00 cr.)

Literature, Global Perspective

Repeatable: No

Selected poetry, prose, and fiction produced since World War I.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 396 Romantic Poets (3.00 cr.)

Humanities and the Arts - Literature

Repeatable: No

Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 450 Studies In Literature (Theme, Author, Genre) (2.00 - 3.00 cr.)

Literature

Repeatable: Yes

A study of a selected writer's work or of literature focusing on a significant theme of literature or of a genre not offered as a distinct course of similar duration within the departmental curriculum.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 450 Studies In Literature: Women's Autobiographical Writing: Private Lives, Public Stories (3.00 cr.)

Humanities and the Arts - Literature

Repeatable: Yes

Women's Autobiographical Writing: Private Lives, Public Stories: The changing contexts of women's lives and how women's actions have shaped and responded to those contexts as seen through women's autobiography. Rhetorical situations and consequences of various types of women's autobiography including autobiography using new media such as blogging.

ENGL-102 or ENGL-112

LIT- 450 Studies in Literature: Alice Walker: Beyond Purple (2.00 - 3.00 cr.)

Humanities and the Arts - Literature

Repeatable: Yes

Study of Alice Walker's short stories, essays, children's literature, poetry, and novels, making connections with the social and historical contexts, particularly the civil rights, anti-Viet Nam war, and women's liberation movements.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

LIT- 450 Experience in China: Modern East Asian Literature and Cinema (3.00 cr.)

Global Perspective

Repeatable: No

Through the Experience China Study Abroad Program, this course introduces students to the cultural, social, political, and aesthetic developments in Modern East Asia through the study of major works of 20th and 21st century Chinese, Japanese, and Korean Literature and film. Includes study of memoirs, writings of political theory, sociology, religion, and history.

Department consent

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 450A Studies In Literature (Theme, Author, Genre) (2.00 - 3.00 cr.)

Repeatable: No

A study of a selected writer's work or of literature focusing on a significant theme of literature or of a genre not offered as a distinct course of similar duration within the departmental curriculum.

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 496 Films And Literature (3.00 cr.)

Humanities and the Arts - Literature

Repeatable: No

Prerequisite: take either ENGL-101 or ENGL-111

LIT- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

Prerequisite: take either ENGL-101 or ENGL-111

LOG – Logic

LOG- 250 Critical Thinking (3.00 cr.)

Repeatable: No

Formulation, clarification and critical evaluation of claims: justification through non-formal argumentational strategies.

LOG- 301 Introduction To Logical Thinking (3.00 cr.)

Logic

Repeatable: No

Problem-solving strategies based on induction and on categorical and propositional deduction.

LOG- 305 Symbolic Logic (3.00 cr.)

Repeatable: No

Propositional and first-order quantificational languages and deductive systems, proof construction, introduction to soundness and completeness, application to natural language reasoning and computability.

LOG- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MATH – Mathematics

MATH- 10 Fundamentals Of Algebra (2.00 cr.)

Repeatable: No

Review of fundamental principles of elementary algebra. Credit earned for MATH-010 will not count toward graduation. A special course fee applies.

MATH- 110 Intermediate Algebra (4.00 cr.)

Repeatable: No

Basic algebraic skills: factoring, exponents, rational expressions, linear equations and inequalities, systems of equations, quadratic equations, and an introduction to functions. A special course fee applies.

Prerequisite: One year H.S. Algebra and Math placement score required, or MATH-010 or higher.

MATH- 118 Concepts Of Mathematics (4.00 cr.)

Mathematics

Repeatable: No

Elementary concepts in mathematical language and reasoning, sets, number systems and theory, algebraic equations, statistics and probability, geometry, computers; historical survey. Students may incur incidental expenses for software.

Prerequisite: One year H.S. Algebra and Math placement score required, or MATH-010 or higher.

MATH- 120 Introductory College Mathematics I (4.00 cr.)

Mathematics

Repeatable: No

Review of basic algebra, solving equations and inequalities, applications of equations and inequalities, functions and their graphs, polynomial equations, and systems of equations. Students may incur incidental expenses for software.
Math Placement or MATH-110 required.

MATH- 121 Introductory College Mathematics II (4.00 cr.)

Mathematics

Repeatable: No

Continuation of MATH-120. Study of functions to include rational, exponential, logarithmic, and trigonometric functions and two dimensional analytic geometry. Students may incur incidental expenses for software.
Math Placement or MATH-120

MATH- 123 Finite Mathematics With Applications (4.00 cr.)

Mathematics

Repeatable: No

Real number system, systems of linear equations and inequalities, sets, functions, vectors, matrices, probability, linear programming, theory of games, Markov chains. Students may incur incidental expenses for software.
Math Placement Test, B- or better in MATH-110, or MATH-120 required

MATH- 150 Calculus with Precalculus A (5.00 cr.)

Mathematics

Repeatable: No

First course in a two-course sequence. Review of basic algebra, solving equations and inequalities, graphing polynomial and rational functions. Limits and derivatives of polynomial and rational functions. Applications of derivatives.
Math Placement or MATH-110 required.

MATH- 151 Calculus with Precalculus B (5.00 cr.)

Mathematics

Repeatable: No

Second course in a two-course sequence. Properties, identities, and derivatives of exponential, logarithmic, and trigonometric functions. Affine transformations and graphing, linear systems of equations, and geometric applications of trigonometry. Integration and the Fundamental Theorem of Calculus.
Prerequisite: Take MATH-150

MATH- 153 Calculus I (4.00 cr.)

Mathematics

Repeatable: No

Functions, limits, continuity, bounds, sets; the derivative of functions and applications; exponential, logarithmic, trigonometric and inverse functions. Not open to those with credit in MATH-154,

MATH-156, MATH-157 or MATH-158. Students may incur incidental expenses for software.

Math placement score or MATH-121 required. Not open to students with credit in MATH-154, MATH-156, MATH-157, or MATH-158.

MATH- 154 Calculus II (4.00 cr.)

Mathematics

Repeatable: No

Continuation of MATH-153: antiderivatives; integration theory and techniques, applications; parametric equations, vectors.

Prerequisite: take either MATH-151, MATH-153 or MATH-156

MATH- 156 Calculus And Analytic Geometry I (5.00 cr.)

Mathematics

Repeatable: No

Review of real numbers, inequalities, absolute values, intervals and continuity; analytic geometry of the plane, limit concepts, derivatives of algebraic functions, definite integral.

Math Placement Test or MATH-121 required.

MATH- 157 Calculus And Analytic Geometry II (5.00 cr.)

Analytic Reasoning - Mathematics

Repeatable: No

Application of derivative and definite integral; conic sections and other algebraic curves; calculus for rational, algebraic, circular, exponential and trigonometric functions; formal integration.

Prerequisite: take either MATH-151, MATH-153 or MATH-156

MATH- 158 Calculus Iii (3.00 cr.)

Repeatable: No

Formal integration continued; parametric equations, polar representation, Cauchy's formula, Taylor's theorem, infinite series, vectors, partial differentiation, multiple integration.

Prerequisite: take MATH-154 or MATH-157

MATH- 180 Foundations Of The Language Of Mathematics (4.00 cr.)

Repeatable: No

Conceptual foundations of mathematics and the language of mathematics. Logical rules of inference, statement forms, methods of proof, universal and existential quantifiers, abstraction and definition, set theory, relations, functions and cardinality. Proofs involving the above concepts and applications of the concepts and methods of proof to particular abstract mathematical objects.

Prerequisite: take either MATH-151, MATH-153 or MATH-156; not for students who took MATH-270

MATH- 196 Uncovering the Role Mathematics Plays in Everyday Life (3.00 cr.)

Repeatable: No

Investigation of mathematical concepts and algorithms that are used in everyday objects and technology. Concepts of fair division, identification numbers, information science, symmetry and patterns, and their applications. Offered for Wisconsin in Scotland program only.

MATH- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MATH- 250 Differential Equations With Linear Algebra (3.00 cr.)

Repeatable: No

Differential equations: first-order and higher- order equations, systems of linear differential equations. Linear algebra: matrices, determinants, systems of linear equations, vector spaces, linear transformations, eigenvalues, eigenvectors.

Prerequisite: take MATH-154 or MATH-157

MATH- 255 Differential Equations (3.00 cr.)

Repeatable: No

Common types of ordinary differential equations of first and second order; linear equations with constant coefficients; series solutions, numerical approximations, systems of ordinary equations.

Prerequisites: take either MATH-154 or 157, and take MATH-275

MATH- 262 Modern Geometry (3.00 cr.)

Repeatable: No

Development of logical discourse, betweenness properties and plane separation, geometric models of axiomatic systems, modern geometry of triangle and circle, transformations (linear, circular), orthogonal systems of circles, elliptic and hyperbolic geometry.

Prerequisite: take either MATH-151, MATH-153 or MATH-156

MATH- 270 Discrete Mathematics (3.00 cr.)

Repeatable: No

Exploration of sets, relations, functions, formal logic, proof techniques, counting techniques, graphs, recurrence relations, and generating functions. Applications in mathematics and computer science.

Prerequisites: take either MATH-153 or MATH-156; not for students who took MATH-180

MATH- 275 Linear Algebra (3.00 cr.)

Repeatable: No

Algebra of linear transformations and matrices. Determinants, equivalence relations, rank systems of equations, vector spaces, orthogonal transformations, characteristic equations and quadratic forms.

Prerequisite: take either MATH-151, MATH-153 or MATH-156

MATH- 370 Modern Algebra I (3.00 cr.)

Repeatable: No

Set theory, mappings, equivalence relations and classes, mathematical induction, Peano's postulates, isomorphisms; development of natural numbers, integers, rational, and real numbers; introduction to integral domains and rings.

Prerequisites: take either MATH-154 or 157, and take MATH-275

MATH- 371 Modern Algebra II (3.00 cr.)

Repeatable: No

Continuation of 355-370; rings, integral domains, fields, polynomials, groups, vector spaces; introduction to algebra of matrices.

Prerequisite: take MATH-370

MATH- 380 Cryptography (3.00 cr.)

Repeatable: No

Classical, public-key and symmetric-key cryptosystems. Basic number theory. Digital signature schemes. Applications to information assurance and cyber security.

Prerequisite: take MATH-370

MATH- 450 Real Analysis I (3.00 cr.)

Repeatable: No

Rigorous development of advanced topics in analysis; functions, real numbers, sequences, Cartesian spaces, sequences of functions, limit superior and inferior, continuous functions.

Prerequisite: take MATH-154 or MATH-157

MATH- 451 Real Analysis II (3.00 cr.)

Repeatable: No

Continuation of 355-450; differentiation, integration, infinite series.

Prerequisite: take MATH-450

MATH- 460 Complex Variables With Applications (3.00 cr.)

Repeatable: No

Complex numbers, analytic functions, elementary functions of complex variables, mapping of elementary functions, integration techniques, power series and calculus of residues.

Prerequisite: take MATH-158

MATH- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MATHED – Mathematics Education**MATHED- 365 Mathematics Education Methods** (3.00 cr.)

Repeatable: No

Content, curriculum, methods, materials, technology, standards and research used in the teaching of mathematics. Design of mathematics instruction for a variety of learners.

Prerequisites: Take STMED-260; Concurrent enrollment in STMED-360 and EDUC-415

MATHED- 409 Mathematics Student Teaching (2.00 - 16.00 cr.)

Repeatable: No

Student teaching experience in mathematics.

Prerequisite: Benchmark II completion

MBE – Marketing and Business Education**MBE- 101 Introduction To Marketing And Business Education** (3.00 cr.)

Repeatable: No

Becoming a teacher in the disciplines of Marketing and Business Education (MBE) within K-12 schools, technical college, community colleges, and adult programs.

MBE- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved area of marketing education. May be recurring. Supervised during work/study periods. Recurring experiences would be designed to build upon previous experiences in the course.

Department consent

MBE- 202 Supervision Of MBE Career & Technical Student Organizations (3.00 cr.)

Repeatable: No

Competencies needed to become a successful advisor, integrate a marketing and/or business education career and technical student organization into curriculum with a focus on the high school division of BPA, FBLA, and DECA.

MBE- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved area of marketing education. May be recurring. Supervised during work/study periods. Recurring experiences would be designed to build upon previous experiences in the course.

Department consent

MBE- 300 Introduction to Teaching Marketing and Business Education (3.00 cr.)

Repeatable: No

A study of becoming a teacher in the disciplines of Marketing and Business Education with a deep focus on their related career and technical student organizations.

MBE- 301 Marketing and Business Methods and Formative Assessment (4.00 cr.)

Repeatable: No

Interpret marketing and business content structures; analyze and develop teaching and learning methods, procedures and activities; plan and demonstrate formative assessments.

Prerequisites: Completion of Benchmark I and EDUC-303

MBE- 311 Marketing And Business Education Project Method (2.00 cr.)

Repeatable: No

Project method of instruction in a career and technical education program. Concurrent enrollment in MBE-312 is required.

Prerequisite: take MBE-101; Corequisite: MBE-312; Benchmark I must be completed.

MBE- 312 MBE Pre-Student Teaching (1.00 cr.)

Repeatable: No

Design and deliver lessons at a PK-12 school district in conjunction with MBE-311.

Prerequisite: MBE101; Corequisite: MBE311; Benchmark I must be completed

MBE- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved area of marketing education. May

be recurring. Supervised during work/study periods. Recurring experiences would be designed to build upon previous experiences in the course.
Department consent

MBE- 355 Marketing And Business Seminar (2.00 - 3.00 cr.)

Repeatable: Yes

Issues and trends in marketing, business and career and technical education. Experiences necessary for success during student teaching and upon initial career entry.

MBE- 365 Integrated Software Applications For Instruction (3.00 cr.)

Repeatable: No

Software applications for the professional and personal use of instructors. The effective use of word processing, spreadsheet, database, presentation, communication and other appropriate software applications with emphasis on curricular integration and professional standards.

Prerequisite: take ICT-103

MBE- 366 Integrated Media Applications For Instruction (3.00 cr.)

Repeatable: No

Prepares instructors to use various media in the learning environment. Emphasis on proper curriculum integration based on sound curriculum design principles and professional standards.

Instructor's consent

Prerequisite: take MEDIA-365

MBE- 401 Marketing Education Curriculum (2.00 - 3.00 cr.)

Repeatable: No

Program, course and lesson-level curriculum development skills. Assessment systems, strategies, design elements, and test development skills.

Prerequisites: take MBE-301, MBE-311, and MBE-312, and completion of Benchmark I

MBE- 409 Marketing Education - Student Teaching (2.00 - 16.00 cr.)

Repeatable: No

Directed teaching and community experiences in selected off-campus schools.

Department consent

Prerequisites: Benchmark II completion and MBE-401

MBE- 411 Business Education Methods And Curriculum (5.00 cr.)

Repeatable: No

Teaching methods and curriculum design for business educators. Emphasis on basic business subjects; business literacy and entry-level job preparation; issues and trends; demonstration and development of a standards-based business education curriculum.

Prerequisite: Benchmark I completion

MBE- 412 Elementary Keyboarding Teaching Methods (1.00 cr.)

Repeatable: No

Developmentally appropriate methods of instruction in keyboarding and emerging input technologies applicable to elementary educational settings.

MBE- 419 Business Education Student Teaching (2.00 - 12.00 cr.)

Repeatable: No

Directed teaching and community experiences in selected off-campus schools.

Department consent

Prerequisites: Benchmark II completion and MBE-411

MBE- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved area of marketing education. May be recurring. Supervised during work/study periods. Recurring experiences would be designed to build upon previous experiences in the course.

Department consent

MBE- 488 Marketing Education-Internship (8.00 - 16.00 cr.)

Repeatable: No

Directed teaching and community experiences in selected off-campus schools.

Department consent

Prerequisites: Benchmark II completion and MBE-401

MBE- 489 Business Education Internship (8.00 - 16.00 cr.)

Repeatable: No

Directed teaching and community experiences in selected off-campus schools.

Department consent

Prerequisite: Benchmark II completion

MBE- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MECH – Engineering Mechanics

MECH- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MECH- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MECH- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MECH- 290 Mechanics Of Solids I (3.00 cr.)

Repeatable: No

Technical calculations, dimensional analysis, freebody diagrams, force systems and equilibrium, friction, elementary statically determinate framed structures, and simple stress.

Prerequisites: take either PHYS-231, PHYS-241, or PHYS-281

MECH- 291 Mechanics Of Solids II (3.00 cr.)

Repeatable: No

Stress and strain, torsion, bending of beams, compound stress, principal stress, deflection of beams, statically indeterminate members and columns.

Prerequisite: take either MECH-290 or PHYS-331

MECH- 292 Dynamics (3.00 cr.)

Repeatable: No

Kinematics of particles, rigid bodies, and systems. Analysis of position, velocity, and acceleration. The relationship between the motion of bodies and forces or torques. Study of particles and rigid bodies subject to translation, rotation, and general planar motion using Newton's laws of motion, Work-energy methods, impulse-momentum methods, and mechanical vibrations.

Prerequisite: take PHYS-291

MECH- 293 Engineering Mechanics (3.00 cr.)

Repeatable: No

Force systems, free body diagrams, and static equilibrium in two and three dimensions. Internal reactions, friction, and frames. Kinematic analysis of particle and rigid body translation, rotation, and general planar motion. Force-acceleration analysis.

Prerequisite: take PHYS-281

MECH- 294 Mechanics of Materials (3.00 cr.)

Repeatable: No

Normal and shear stresses and strains. Stresses and deformations in objects subject to axial, torsional, and flexural loadings. Shear and bending moment diagrams. Stress transformations and principle stresses.

Prerequisite: take PHYS-291

MECH- 298 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

MECH- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MECH- 332 Mechanical Design (4.00 cr.)

Repeatable: No

Analysis and design of machine elements: gearing bearings, shafting and friction devices.

Prerequisites: take MECH-290 and MECH-291

MECH- 337 Mechanical Design Practicum (3.00 cr.)

Repeatable: No

Practical application of mechanical design in a team project.

Creativity, documentation standards, design for manufacturability, design analysis, team dynamics, communication skills, and finite element analysis are applied to an industrial standard in the design of a machine, system, or product.

Prerequisites: take ENGG-280 and MECH-332 (may be concurrently enrolled)

MECH- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MECH- 393 Mechanics Of Machinery II (3.00 cr.)

Repeatable: No

Graphical analysis and synthesis of linkages, cams, gear trains, displacement, velocity, acceleration and dynamic forces.

Prerequisite: take MECH-290

MECH- 398 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

MECH- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MECH- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MECH- 498 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

MECH- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MFGE – Manufacturing Engineering**MFGE- 106 Impacts Of Engineering Design (2.00 cr.)*****Global Perspective, Technology***

Repeatable: No

Investigation and exploration into past and present practices of engineering design and the resulting impacts on people, society, and the environment.

MFGE- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MFGE- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MFGE- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MFGE- 275 Thermodynamics & Heat Transfer (2.00 cr.)

Repeatable: No

Application of thermodynamics and heat transfer fundamentals to the design and analysis of manufacturing processes and systems.

Prerequisite: take PHYS-291 and MATH-250 (which may be taken concurrently)

MFGE- 325 Computer Aided Manufacturing For Manufacturing Engineers (3.00 cr.)

Repeatable: No

Effects of product mix and demand patterns on manufacturing system design and selection of process control methods. Introduction to quick changeover strategies and reprogrammable automation including numerically controlled machine tools, robotics, group technology, CAD/CAM, automated inspection and other computerized processing techniques.

Prerequisites: take ENGGR-210, and take MFGT-252 or MFGT-341

MFGE- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MFGE- 351 Manufacturing Process Engineering I (3.00 cr.)

Repeatable: No

Understanding, analysis, and control of machining and metal forming processes. Emphasis is given to process characteristics of heat transfer, process forces and pressures, and machine tool dynamics. Sheet metal designs utilizing solid modeling software.

Prerequisites: take CHEM-341, MECH-294, MFGT-252, MFGE-275, and STAT-330

MFGE- 352 Manufacturing Process Engineering II (3.00 cr.)

Repeatable: No

Analysis of polymer and metal behavior in processing; mechanics of processing; identification of appropriate fabrication processes; diagnosis of process related problems; mathematical modeling of process designs.

Prerequisites: take MFGT-251, MFGT-253, MECH-294, MFGE-275, and STAT-330

MFGE- 363 Controls And Instrumentation (4.00 cr.)

Repeatable: No

Programmable logic controllers, structured ladder logic developments, input/output module description, and interfacing with analog and digital sensors and actuators. Motion, temperature, pressure and flow sensors. Advantages of closed loop control, mathematical modeling of electric and mechanical systems, stability analysis and frequency response. Introduction to motion control.

Prerequisites: take ELEC-290 and MATH-250

MFGE- 365 Control Theory (2.00 cr.)

Repeatable: No

Mathematical modeling of electrical and mechanical systems, stability analysis, and frequency response. Laplace transforms and transfer functions. Introduction to classical control theory.

Controller design for stabilization and/or performance.

Prerequisites: take ELEC-290 and MATH-250; not for students taking MFGE-363

MFGE- 391 Fluid Mechanics (2.00 cr.)

Repeatable: No

Fundamental fluid properties. General Flow characteristic, including viscid/inviscid, laminar/turbulent, steady-state/transient, compressible/incompressible, and internal/external flow. Static pressure distributions and related forces. Conservation of mass and energy applied to both inviscid and viscid flows. Pump behavior and sizing of pumps for systems. Fluid equipment, including valves, actuators, flow measurement, and pressure measurement.

Prerequisite: take MFGE-275

MFGE- 395 Seminar (1.00 - 2.00 cr.)

Repeatable: No

(Title will reflect specific manufacturing content.) Designed to upgrade effectiveness of teachers or secondary school manufacturing content.

MFGE- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MFGE- 400 Workshop: (1.00 - 3.00 cr.)

Repeatable: Yes

Special topics in manufacturing, providing hands- on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

MFGE- 400 Intro to FAB Lab: How to Make Anything (1.00 cr.)

Repeatable: No

Introduction to personal digital fabrication using the UW-Stout Discovery Center BAB Lab, modeled after the FAB Lab at the

Massachusetts Institute of Technology Center for Bits and Atoms. Use of laser cutters, 3-D printers, vinyl cutters, SHOPBot CNC routers, and desk milling machines and other digital and analog tools to fabricate and test design projects. Explore a variety of fields including graphic design, art, business, computer-assisted design, physical and natural science, mathematics, and engineering.

MFGE- 405 Capstone I: Concurrent Design (3.00 cr.)

Repeatable: No

Concurrent product design and development. Concept of design; brainstorming, problem solving, and creativity methods. Engineering methods. Design analysis, solid modeling, finite element analysis and information sources. Development of teamwork and communications skills. Consideration of cell needs and limitations. Prerequisites or Corequisites: take MFGE-351, MFGE-352, and MFGE-441

MFGE- 410 Capstone II: Manufacturing System Design (3.00 cr.)

Repeatable: No

Dedicated and flexible manufacturing systems through the design, building and testing of a flexible manufacturing cell that produces a discrete family of parts, design of part transfer, tooling, sensing, production control and integrated inspection systems will be emphasized.

Prerequisite: Take MFGE-405; Prerequisites or corequisites: MFGE-325, MFGE-363, and MFGE-415

MFGE- 415 Machine Vision And Robotics (2.00 cr.)

Repeatable: No

Design of machine vision and industrial robotic applications, including cost justification.

Prerequisites: take INMGT-300 and MECH-293

MFGE- 416 Machine Vision Systems (1.00 cr.)

Repeatable: No

Design a machine vision system to inspect parts geometry.

Prerequisite: take PHYS-282 or PHYS-293

MFGE- 440 Manufacturing System Design And Simulation (3.00 cr.)

Repeatable: No

Design of manufacturing systems using contemporary methods and philosophies. Modeling and comparison of system designs using simulation software. Interpretation of experimental simulation results to evaluate system design alternatives. Preparation of technical reports summarizing projects.

Prerequisite or Corequisite: take INMGT-335

MFGE- 441 Design Of Jigs, Fixtures, And Tooling (3.00 cr.)

Repeatable: No

Design of tooling used for machining, locating and transferring multiple parts for fixed and flexible manufacturing. Design, setup and development of tooling for robots, computer numerical control machines and other production equipment. Transfer line tooling.

Prerequisites: MFGT-252, ENGGR-210, and MECH-294

MFGE- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MFGE- 465 Reliability Engineering (3.00 cr.)

Repeatable: No

A practical introduction to reliability engineering with the opportunity for application. topics covered include reliability need, calculations, prediction and modeling, and test design.

Prerequisite: take STAT-330

MFGE- 490 Manufacturing System Design Problems (1.00 - 3.00 cr.)

Repeatable: No

Manufacturing system design through the application of previously learned principles and techniques. Issues to be addressed include: product design for manufacturability, process and tooling design and fabrication, system layout and equipment configuration, information and control architecture, implementation of quick-changeover strategies, task sequencing and scheduling, and simulation and evaluation of alternatives.

MFGE- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MFGT – Manufacturing Technology

MFGT- 110 Materials And Manufacturing Processes (3.00 cr.)

Repeatable: No

Manufacturing processes, material properties and their selection for product functions. Structure and characteristics of metal, polymer/wood, ceramic and composite materials will be examined.

MFGT- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MFGT- 150 Introduction To Engineering Materials (3.00 cr.)

Repeatable: No

Exposure to engineering materials, their properties, and behavior. topics will include: material types, testing, mechanical properties, heat treatment, and material selection. Students are expected to have had H.S. chemistry.

Math Placement \geq MATH-120, or MATH-150

MFGT- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MFGT- 202 Welding And Casting Processes (3.00 cr.)

Repeatable: No

Lab intensive class utilizing various processes and parameters in the welding and foundry areas.

Prerequisite: take MFGT-110

MFGT- 203 Machining Metal Forming Processes (3.00 cr.)

Repeatable: No

Machine tool concepts providing an operational knowledge of traditional and non-traditional machining processes. Fundamental forming machine and hand tool operations. Sheet metal pattern development.

Prerequisite: take MFGT-110

MFGT- 204 Polymer Processes (3.00 cr.)

Repeatable: No

Introduction to properties of plastic, elastomeric and fiber-reinforced composite materials and the processes used to manufacture products from them. Primary and secondary manufacturing processes used to convert wood-fiber materials into components and/or finished products.

Prerequisite: take MFGT-110

MFGT- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MFGT- 250 Introduction To Plastics (3.00 cr.)

Repeatable: No

Examine basics of molecular structure, mechanical behavior, and rheological properties of plastics. Overview of plastics processing, new technologies related to processing, post-consumer-life, and introduction to ASTM/ISO standards used for testing and materials characterization.

Prerequisite: take MFGT-150

MFGT- 251 Fundamentals of Plastics Materials and Processing (3.00 cr.)

Repeatable: No

Introduction to polymers, including their material, mechanical, and rheological properties. Process fundamentals including setup, operation, and troubleshooting of primary and secondary processes through a combination of classroom lectures and laboratory experiments. Introduction into analytical testing methods for characterizing polymers and analyzing defects and failures.

Prerequisite: take MFGT-150 or MFGT-110 or PKG-220

MFGT- 252 Material Removal And Forming Processes (3.00 cr.)

Repeatable: No

Machine tool concepts providing an operational knowledge of machining and metal forming processes. Analysis and application of primary and secondary processing methods for the manufacture of products. Measurement principles and practice applied to inspection

and process control. Development of process designs appropriate for product specifications.

Prerequisite: take either MFGT-150 or MFGT-110

MFGT- 253 Joining And Casting Processes (3.00 cr.)

Repeatable: No

Process concepts providing an operational knowledge of the practice and theory of welding, thermal cutting, adhesive bonding, and metal casting processes. Analysis and application of primary and secondary processing methods for the manufacture of products. Development of process designs and practices appropriate for product specifications, inspection and process control.

Prerequisite: take either MFGT-150 or MFGT-110

MFGT- 303 Computer Aided Manufacturing (3.00 cr.)

Repeatable: No

Justification for and application of computer assistance in manufacturing process; machine process control, inventory and materials handling, robotics and automated assembly, product design and part grouping in relation to total manufacturing operation.

Prerequisites: take MFGT-203 or MFGT-252, and take ENGR-112 or AEC-131

MFGT- 315 Metallurgy (3.00 cr.)

Repeatable: No

Properties of crystalline solids, production of iron and steel, the carbon-iron equilibrium diagram, principles of heat treatment, properties of ferrous alloys. Production, properties, and theory of the most important non-ferrous metals and alloys.

MFGT- 330 Plastics For Teachers (2.00 cr.)

Repeatable: No

Overview of plastics as a manufacturing material. Focus on plastics processes: injection molding, blow molding, extrusion, thermoforming, and reinforced resin composites. Includes lab projects for the technology education classroom and tours to plastic processing industries.

MFGT- 341 Injection Molding Technology (3.00 cr.)

Repeatable: No

Injection molding process parameters, part and tooling design, materials selection, quoting, rapid prototyping, troubleshooting, and cycle time reduction efforts. Laboratory experiments for understanding various technologies associated with injection molding of quality parts.

Prerequisite: take either MFGT-250 or MFGT-251

MFGT- 342 Thermoform and Blow-Molding Technology (3.00 cr.)

Repeatable: No

Part/mold design, film/sheet forming techniques, methods of heating, sheet stretching and cooling, draw ratio calculations, materials selection, part thinning, and other aspects of thermoforming. Laboratory experiments for understanding various technologies associated with thermoforming and blow molding of quality parts, including tooling options, failure analysis, and product design.

Prerequisite: take either MFGT-250 or MFGT-251

MFGT- 343 Extrusion Technology (3.00 cr.)

Repeatable: No

Extrusion and the various processes associated with extrusion; profile, flat film, blown film and die design. Laboratory experiments for understanding various technologies associated with extrusion of quality parts, including tooling options, failure analysis, and product design.

Prerequisite: take either MFGT-250 or MFGT-251

MFGT- 345 Design And Simulation Of Manufacturing Systems (3.00 cr.)

Repeatable: No

Design of manufacturing systems using contemporary methods and philosophies. Modeling and comparison of system designs using simulation software. Interpretation of experimental simulation results to evaluate system design alternatives. Preparation of technical reports summarizing projects. Recommended: statistical knowledge.

Prerequisites: take STAT-130, STAT-320 or STAT-330

MFGT- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MFGT- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MFGT- 400 Workshop: (1.00 - 3.00 cr.)

Repeatable: Yes

Special Topics manufacturing, providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

MFGT- 405 Industrial Robotics (3.00 cr.)

Repeatable: No

Specifications, planning, purchasing decisions, and programming of industrial robots.

Prerequisites: take MECH-290 or PKG-350

MFGT- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MFGT- 497 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

MFGT- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MSCS – Mathematics, Statistics and Computer Science

MSCS- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MSCS- 192 Introductory Bioinformatics (2.00 cr.)

Repeatable: No

Introduction to the design, development, and application of bioinformatics tools for genomics and other integrated biological research questions. Some computer programming.

MSCS- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MSCS- 280 Graph Theory With Applications In Computer Science (3.00 cr.)

Repeatable: No

Principles of graph theory, computer representation of graphs, properties of general graphs, structure and properties of special graphs, flow networks, and computer applications of graph theory.

Prerequisites: Take CS-145 and take either MATH-180 or MATH-270

MSCS- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MSCS- 390 Topics (1.00 - 3.00 cr.)

Repeatable: Yes

Topics of current importance in applications of mathematics to problems in business, industry, government or society. May be repeated for additional credit with consent of program director.

MSCS- 390 Topics: Introduction to Parallel Processing with CUDA (2.00 cr.)

Repeatable: No

Introduction to parallel processing using the Compute Unified Device Architecture (CUDA) system. Overview of CUDA architecture, kernels, grids, threads, memory structure and performance considerations. Basic algorithms and examples of applications to computer graphics, image processing and scientific computing. Prerequisites: take CS-244 and MATH-275

MSCS- 390 Fourier Transform and Applications (3.00 cr.)

Repeatable: No

Fundamental theory of Fourier transform with applications to a variety of ics. Traditional definition of Fourier series, the modern functional definition of Fourier transform and its properties. Discrete and fast Fourier transform. Convolution and Shah-function and their applications to Fourier transform.

MSCS- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MSCS- 446 Numerical Analysis I (3.00 cr.)

Repeatable: No

Theory and applications of numerical methods for linear algebra, non-linear equations and polynomial interpolation.

Prerequisites: take MATH-158, MATH-275 and CS-145

MSCS- 447 Numerical Analysis II (3.00 cr.)

Repeatable: No

Theory and applications of numerical methods for approximation, numerical integration and differentiation, differential equations, and Fourier analysis.

Prerequisites: take MSCS-446 and MATH-255

MSCS- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MSCS- 475 Applied Mathematics Internship (2.00 - 8.00 cr.)

Repeatable: Yes

Off-campus work and study in approved position to gain experience in using computer and/or statistical techniques in the analysis and solution of real-world problems. Interns receive salaried appointments with cooperating companies for summer or summer plus one semester.

Department consent

Must be Junior level or higher

MSCS- 492 Mathematical And Computational Foundations Of Bioinformatics (3.00 cr.)

Repeatable: No

Examination of different types of algorithms employed in bioinformatics, their mathematical foundations, and software implementation. Topics in mapping DNA, sequencing DNA,

comparing sequences, predicting genes, finding signals, identifying proteins, repeat analysis, DNA arrays, genome rearrangements, molecular evolution, phylogenetics, machine learning, systems biology, and computational biology.

Prerequisites: must be Senior level and Applied Math & Computer Science major.

MSCS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MSL – Military Science and Leadership

MSL- 101 Leadership and Personal Development (1.00 cr.)

Repeatable: No

Introduction to the Army profession and personal development of life skills such as critical thinking, ethical reasoning, goal setting, time management, physical fitness, and stress management. off campus weekend leadership orientation in a military environment with outdoor physical activities, including land navigation and confidence course training.

MSL- 102 Basic Leadership (1.00 cr.)

Repeatable: No

Establishes foundation of basic leadership fundamentals such as problem solving, communication, goal setting, and techniques for improving listening and speaking skills. Life skills are reinforced as well as an introduction to counseling and operations orders. Lab provides instruction on squad movement techniques, map reading, physical fitness and marching techniques.

MSL- 201 Foundations of Leadership (2.00 cr.)

Repeatable: No

Explores the dimensions of creative and innovative leadership strategies and styles by examining team dynamics and historical leadership theories. Students practice aspects of personal motivation, team building, and ethical reasoning in the context of planning, executing, and assessing team exercises and participating in leadership labs.

Instructor's consent

Prerequisite: take MSL-101

MSL- 202 Leadership And Teamwork (2.00 cr.)

Health and Physical Education - Activity

Repeatable: No

Examines building successful teams, methods for influencing action, effective communication in setting and achieving goals, the importance of timing the decision, creativity in the problem- solving process, and obtaining team cohesion through immediate feedback. The lab applies basic leadership theory and decision making during practical exercises in a field environment.

Prerequisite: take MSL-102

MSL- 301 Adaptive Team Leadership (3.00 cr.)

Repeatable: No

Students study, practice, and apply the fundamentals of Army

leadership, officership, Army values and ethics, personal development, and small unit tactics at the team and squad level. Cadets practices planning, coordinating, and leading a team or squad during classroom PEs, Leadership Lab, and in a field environment.

Instructor's consent

MSL- 302 Leadership Under Fire (3.00 cr.)

Repeatable: No

The role of communication, value, and ethics in effective leadership. Ethical decision making, diversity, spirituality, and survey of Army leadership doctrine. Emphasis on improving oral and written communication abilities. Lab reinforces small-unit tactical training while employing troop-leading procedure to accomplish complex planning and decision making.

Instructor's consent

MSL- 350 Leader Development And Assessment Course Field Experience (2.00 cr.)

Repeatable: No

A 33-day ROTC training event designed to develop and evaluate leadership ability, including judgment, common sense, ingenuity and stamina. Perform complex tasks and make difficult decisions in demanding situations.

Prerequisites: take MSL-301 and MSL-302

MSL- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MSL- 401 Adaptive Leadership (3.00 cr.)

Repeatable: No

Transitions the focus of student learning from being trained, mentored and evaluated to learning how to train, mentor, and evaluate underclassmen. Students learn the duties and responsibilities as a member of a staff and develop proficiency in risk management and reducing stress when planning, executing, and assessing training events.

Instructor's consent

MSL- 402 Leadership In A Complex World (3.00 cr.)

Repeatable: No

Study includes a case study analysis of military law and practical exercises on establishing an ethical command climate. Students must complete a semester-long Senior Leadership Project that requires them to plan, organize, collaborate, analyze, and demonstrate their leadership skills. The lab continues to sharpen the students' leadership skills.

Instructor's consent

MSL- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MUSIC – Music

MUSIC- 101 Class Piano I (1.00 cr.)

Performing Arts

Repeatable: No

Group instruction in piano technique and repertoire at beginner level. One one-hour lesson per week; additional practice time required.

MUSIC- 112 Advanced Voice I (1.00 cr.)

Repeatable: No

Private instruction in vocal technique and repertoire. One 1/2-hour lesson per week; additional practice time required; optional recital. Department consent

MUSIC- 130 Music Appreciation (2.00 cr.)

Music Appreciation

Repeatable: No

Music materials as they pertain to perceptive listening; music and musicians from medieval times to present; students gain significant awareness of great music. Students do not earn credit for both MUSIC-130 and MUSIC-132.

MUSIC- 132 Music In Our World (3.00 cr.)

Music Appreciation, Global Perspective

Repeatable: No

Music materials as they pertain to perceptive listening; music and musicians from the beginnings of music to the present. Great music from many cultures. Students do not earn credit for both MUSIC-130 and MUSIC-132.

MUSIC- 201 Class Piano II (1.00 cr.)

Performing Arts

Repeatable: No

Continuation of MUSIC-101 at intermediate level. One one-hour lesson per week; additional practice time required.

MUSIC- 206 Music For The Young Child (2.00 cr.)

Repeatable: No

Music elements and experience, methods and materials for guiding the musical growth of children from birth through third grade.

MUSIC- 212 Advanced Voice II (1.00 cr.)

Repeatable: No

Continuation of MUSIC-112.

Department consent

MUSIC- 231 Honors Jazz History (3.00 cr.)

Music Appreciation, Contemporary Issues, Racial & Ethnic Studies Category A

Repeatable: No

American jazz connections to changes in society: jazz origins and characteristics, a development of artists and styles, and a music's reflection of individual expression, race relations, and acceptance by society.

Honors Program Students or GPA 3.0 or better

MUSIC- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entailing recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MUSIC- 264 Jazz Band (1.00 cr.)***Performing Arts***

Repeatable: Yes

Jazz styles and improvisation from the dance band era to the present. Study and performance of contemporary "big band" jazz.

Membership is open to all qualified students. Audition may be necessary. Repeatable for additional credit

Instructor's consent

MUSIC- 266 Concert Band (1.00 cr.)***Performing Arts***

Repeatable: Yes

Fundamentals of musical expression, tone production and quality, and special problems of technique. Membership by audition only.

MUSIC- 267 Symphonic Singers (1.00 cr.)***Performing Arts***

Repeatable: Yes

Advanced choral techniques, reading and analysis of choral music of all types and periods. A special course fee applies.

MUSIC- 268 Solo And Ensemble (1.00 cr.)

Repeatable: Yes

Coaching of advanced vocal and instrumental performers for public performance.

MUSIC- 270 Vocal Jazz Ensemble (1.00 cr.)***Performing Arts***

Repeatable: Yes

Performance of vocal jazz in a select choral ensemble. Membership by audition only.

MUSIC- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

MUSIC- 312 Advanced Voice Iii (1.00 cr.)

Repeatable: Yes

Continuation of MUSIC-212.

Department consent

MUSIC- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MUSIC- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

MUSIC- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

NANO – Nanotechnology**NANO- 101 Exploration Of Nanotechnology (2.00 cr.)*****Natural Science with Lab***

Repeatable: No

Introduction to main principles and concepts of nanotechnology with an exploration of the societal and environmental impact of nanotechnology across a vast array of fields including health care, manufacturing, environment, biotechnology, energy and food production, and information technology.

Math Placement or MATH-120

NANO- 301 Nanostructures (3.00 cr.)

Repeatable: No

Introduction to nanostructured materials, theory of processes to design materials with nanostructure, and properties and behavior of nanostructured materials.

Prerequisites: take NANO-101 and CHEM-341

NANO- 330 Characterization Methods Of Nanomaterials (3.00 cr.)

Repeatable: No

Laboratory based course that covers basic techniques and theory of modern characterization methods of nanomaterials. Techniques include: electron microscopy, scanning probe microscopy, diffraction spectroscopy, and emission spectroscopy.

Prerequisites: take CHEM-341 and PHYS-282

NANO- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

NANO- 401 Nanotechnology Applications (3.00 cr.)

Repeatable: No

Review of current nanotechnology applications including societal effects.

Prerequisite: take NANO-301

PAX – Peace Studies

PAX- 201 Introduction to Applied Peace Studies (3.00 cr.) ***Contemporary Issues, Social Responsibility and Ethical Reasoning***

Repeatable: No

A general introduction to peace studies as an area of inquiry. The nature and dynamics of violent conflict, the conditions and practices of peace in its many forms, emphasis on peace building and nonviolent conflict transformation.

PAX- 251 Special Topics in Peace Studies (1.00 - 3.00 cr.)

Repeatable: Yes

Topics of current or historical importance in the understanding of peace and conflict. Designated topics announced prior to the start of the course. May be repeated for elective credit, but not more than twice for a total of 6 credits.

PAX- 301 Conflict Analysis and Peacebuilding (3.00 cr.)

Repeatable: No

The study and practice of conflict resolution. An exploration of the origins and causes of conflict at multiple scales, how individuals and states act and react in situations of conflict, and practices and strategies for resolving conflict with an emphasis on nonviolence and peacebuilding.

Prerequisite: take PAX-201

PAX- 401 Applied Peace Studies Seminar (3.00 cr.)

Repeatable: No

An analysis of beliefs and practices of peace. Students work to formulate their own ideas and positions and to develop critical arguments on peace theories by integrating the insights and arguments of a range of academic and popular sources on the subject. Culminates in a major peace-related research project.

Prerequisite: take PAX-301

PE – Physical Education

PE- 101 Aerobic Dance (1.00 cr.)

Repeatable: No

Introduction to aerobic dance as a technique for the development of physical fitness.

PE- 103 Archery/Beginning (1.00 cr.)

Repeatable: No

Basic target archery shooting skills including tournament target archery, equipment selection and care, safe shooting behaviors. A special course fee applies.

PE- 105 Bow Hunting (1.00 cr.)

Repeatable: No

Conservation, safety, selection and care of equipment; techniques and practical bow hunting experience. A special course fee applies.

PE- 107 Badminton (1.00 cr.)

Repeatable: No

Emphasis on fundamental skills, terminology, rules, singles and doubles play for the game of badminton.

PE- 109 Basketball (1.00 cr.)

Repeatable: Yes

PE- 110 Bicycling (1.00 cr.)

Repeatable: No

Bicycling for health and fitness: safety, technique, and knowledge.

PE- 113 Bowling (1.00 cr.)

Repeatable: No

A special course fee applies.

PE- 115 Canoe Techniques (1.00 cr.)

Repeatable: No

Introduction to the skill of canoeing, including stroke techniques, water hydrology, equipment and safety. A special course fee applies.

PE- 120 Self-Paced Personal Fitness (1.00 cr.)

Repeatable: No

Improvement of personal physical fitness through self-paced exercise programs and fitness activities.

PE- 121 Exercise For Fitness (1.00 cr.)

Repeatable: No

Introduction to the importance, purpose, and mechanics of exercise for fitness.

PE- 122 Fitness Yoga (1.00 cr.)

Repeatable: No

An introduction to yoga as a mind/body fitness practice.

PE- 125 Fly Fishing (1.00 cr.)

Repeatable: No

Fly tying, casting techniques, literature, stream craft, equipment considerations, conservation ethics and natural resources stewardship.

PE- 129 Golf (1.00 cr.)

Repeatable: No

Fundamental principles of golf; skills, history, etiquette and application of techniques. Required: play 27 holes of golf, pay greens fees, furnish 3 golf balls for class use. A special course fee applies.

PE- 135 Walking/Jogging (1.00 cr.)

Repeatable: No

The study and practice of walking/jogging as an exercise philosophy, as an exercise technique and an exercise program.

PE- 136 Ice Fishing (1.00 cr.)

Repeatable: No

An introduction to the sport of ice fishing.

PE- 142 Outdoor Skills (1.00 cr.)

Repeatable: No

Introduction to the knowledge and skills of camping, outdoor skills, and backpacking. A special course fee applies.

PE- 143 Rock Climbing (1.00 cr.)

Repeatable: No

Rock climbing as a recreational sport.

PE- 144 Personal Defense (1.00 cr.)

Repeatable: No

Development of physical fitness for defense consciousness; techniques of initial and basic defense skills in weapon and rape attacks.

PE- 145 Practicum In Intercollegiate Athletics (1.00 cr.)

Repeatable: Yes

Practical experience in intercollegiate athletics, including completion of a season as a member of an intercollegiate team.

Department consent

Prerequisite: take PE-200

PE- 146 Racquetball/Beginning (1.00 cr.)

Repeatable: No

Introduction to the fundamental skills, terminology, and rules for racquetball.

PE- 148 Relaxation (1.00 cr.)

Repeatable: No

An introduction to the principles and skills of relaxation as applied in everyday life.

PE- 150 Snowboarding (1.00 cr.)

Repeatable: No

An introduction to the skills and safety aspects basic to snowboarding. A special course fee applies.

PE- 152 Skiing (1.00 cr.)

Repeatable: No

An introduction to the skills and safety aspects basic to the lifetime sport of downhill skiing. A special course fee applies.

Department consent

PE- 154 Fishing (1.00 cr.)

Repeatable: No

History, terminology, regulations, equipment and techniques involved in the recreational activity of fishing.

PE- 155 Introduction to Curling (1.00 cr.)

Repeatable: No

Definition and application of curling terminology, history, etiquette, technique and strategy. Curling's interrelationship with mental and physical wellness, and professional opportunities. A special course fee applies.

PE- 156 Soccer (1.00 cr.)

Repeatable: No

The development and improvement of the skills and tactics required in the sport of soccer.

PE- 159 Softball (1.00 cr.)

Repeatable: No

The development and improvement of the skills required in the sport of softball.

PE- 173 Skin And Scuba Diving (1.00 cr.)

Repeatable: No

Introduction to the principles and skill techniques of skin and scuba diving. A special course fee applies.

PE- 176 Tennis/Beginning (1.00 cr.)

Repeatable: No

Emphasis on fundamental skills, terminology, rules, singles and doubles play for the game of tennis.

PE- 182 Tumbling I (1.00 cr.)

Repeatable: No

An introduction to basic tumbling skills, including forward, backward, and sideward rotational skills as well as springing and vaulting movements from the hands and feet.

PE- 183 Tumbling II (1.00 cr.)

Repeatable: No

Continued study of tumbling techniques including forward and backward rotational skills, twisting, and connections of rotational skills.

Prerequisite: take PE-182

PE- 184 Tumbling III (1.00 cr.)

Repeatable: No

Continued study of tumbling techniques including multiple twisting and multiple flipping rotational skills.

Prerequisite: take PE-183

PE- 185 Volleyball (1.00 cr.)

Repeatable: Yes

The application of techniques and rules of the game of volleyball.

PE- 187 Weight Training (1.00 cr.)

Repeatable: No

Improvement of general physical strength and fitness using the overload method.

PE- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PE- 200 Orientation To Intercollegiate Athletics (1.00 cr.)

Repeatable: No

Introduction to intercollegiate athletics, including NCAA and conference regulations; current issues, such as professional sports,

costs, drugs, Title IX, minority issues and ethics; components of athletic programs; physiology of exercise; and psychology of sport.

PE- 201 Wellness and Social Responsibility (3.00 cr.)

Social Responsibility and Ethical Reasoning

Repeatable: No

Six dimensions of wellness, physical health, intellectual health, environmental health, social health, spiritual health, emotional health. Social responsibility of health: assess own health, create healthy lifestyle. Discuss health and ethically related issues, current trends, risks and benefits.

PE- 202 Lifelong Fitness 2: League Sports (3.00 cr.)

Social Responsibility and Ethical Reasoning

Repeatable: No

Introduction to league sports played through adult years. Etiquette and rules, skills and strategies.

PE- 203 Team Sports (3.00 cr.)

Social Responsibility and Ethical Reasoning

Repeatable: No

Introduction to team sports: skills and strategies, rules, etiquette, and ethics.

PE- 204 Competition in the 21st Century (3.00 cr.)

Social Responsibility and Ethical Reasoning

Repeatable: No

Investigation into the contemporary issues and ethical considerations of Intercollegiate athletic competition. Topics will include sport governance, contemporary social issues, psychological aspects, and proper training.

PE- 205 Lifelong Wellness: Biggest Loser Style (3.00 cr.)

Contemporary Issues, Social Responsibility and Ethical Reasoning

Repeatable: No

Personal wellness through healthy lifestyle choices and physical activity.

PE- 265 Physical Activities For Young Children (2.00 cr.)

Repeatable: No

Sequential development of physical perceptual skills in children, birth to age 5; perceptual motor activities that promote development.

PE- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PE- 345 Basketball Officiating (1.00 cr.)

Repeatable: No

Rules and officiating techniques for men's and women's basketball; preparation for DGWS and/or WIAA officiating certifications.

PE- 346 Football Officiating (1.00 cr.)

Repeatable: No

Application of football officiating rules and techniques.

PE- 352 Theory And Management Of Coaching (2.00 cr.)

Repeatable: No

Current management principles and practices applied to the profession of coaching.

PE- 362 Psycho-Social Aspects Of Athletics (2.00 cr.)

Repeatable: No

Examination of the psychology of sport and human movement. Understanding motivation, individual differences and social influence.

PE- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PE- 401 Coaching Gymnastics (2.00 cr.)

Repeatable: No

Elements of gymnastic tumbling and use of gymnastic apparatus as part of a modern physical education program.

PE- 460 Coaching Basketball (2.00 cr.)

Repeatable: No

Fundamentals and methods of teaching and coaching basketball, definite plan of offense and defense, selected techniques analyzed, rules and practice schedules, theories and their applications.

PE- 461 Coaching Football (2.00 cr.)

Repeatable: No

Fundamentals and methods of teaching and coaching football, definite plan of offense and defense, selected techniques analyzed, rules and practice schedules, theories and their applications.

PE- 470 Coaching Baseball (2.00 cr.)

Repeatable: No

Fundamentals and methods of teaching and coaching baseball, definite plan of offense and defense, selected techniques analyzed, rules and practice schedules, theories and their applications.

PE- 471 Coaching Track And Field (2.00 cr.)

Repeatable: No

Fundamentals and methods of teaching and coaching track and field, definite plan of offense and defense, selected techniques analyzed, rules and practice schedules, theories and their applications.

PE- 478 Coaching And Officiating Volleyball (2.00 cr.)

Repeatable: No

Skills and techniques of coaching and officiating competitive volleyball.

Instructor's consent

Prerequisite: take PE-185

PE- 480 Coaching Youth Athletes (2.00 cr.)

Repeatable: No

Coaching strategies for organized non-varsity youth sports programs--philosophy, psychology, physiology, pedagogy, prevention and care of injuries, and legalities.

PE- 481 Coaching Hockey (2.00 cr.)

Repeatable: No

Philosophies, fundamentals and methods of teaching and coaching offensive and defensive hockey skills and strategies; organizing and administering hockey programs at all age levels.

PE- 482 Coaching Softball (2.00 cr.)

Repeatable: No

Philosophies, fundamentals and methods of teaching and coaching offensive and defensive softball skills and strategies; organizing and administering softball programs at all age levels.

Must be Sophomore level or higher

PE- 483 Coaching Soccer (2.00 cr.)

Repeatable: No

Philosophies, fundamentals and methods of teaching and coaching offensive and defensive soccer skills and strategies; organizing and administering soccer programs at all age levels.

Must be Sophomore level or higher

PE- 490 Practicum In Coaching (1.00 - 3.00 cr.)

Repeatable: No

On- or off-campus work and study in athletic coaching with competitive teams.

Department consent

PE- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PHIL – Philosophy

PHIL- 201 Introduction to Philosophy (3.00 cr.)

Philosophy, Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Introduction to the principal problem areas and history of philosophy, as well as to the nature of philosophical investigation.

PHIL- 205 Philosophy Of Religion (3.00 cr.)

Philosophy

Repeatable: No

Principal philosophical problems in the various dimensions of religious experience and belief.

PHIL- 215 Eastern Philosophy (3.00 cr.)

Philosophy, Global Perspective

Repeatable: No

Philosophies of India, China and Japan: Hinduism, Buddhism, Confucianism, Taoism and Zen Buddhism.

PHIL- 220 Multicultural Philosophy (3.00 cr.)

Philosophy

Repeatable: No

African American, Hispanic American, Asian American, American Indian, and Feminist philosophies. Philosophical issues of race, social

justice, values, environmental ethics, spiritual belief, and epistemology.

PHIL- 225 Belief, Knowledge And Truth (3.00 cr.)

Philosophy

Repeatable: No

Justification of rational belief and knowledge and methods used for obtaining them, with particular emphasis on problems of evidence and truth.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

PHIL- 235 General Ethics (3.00 cr.)

Philosophy, Social Responsibility and Ethical Reasoning

Repeatable: No

Ethical valuing process: principal ethical theories and their application to common human problems.

Prerequisites: ENGL-102 or ENGL-112 or ENGL-113

PHIL- 275 Business Ethics (3.00 cr.)

Philosophy, Social Responsibility and Ethical Reasoning

Repeatable: No

Ethical valuing process and major ethical standards applied to business contexts such as basic ethical perspectives on business ethics, the ethical basis of capitalism, the role of government regulation, corporate responsibility, professional and corporate ethical codes, product liability, marketing, global economics and international trade, property rights, and environmental sustainability.

PHIL- 310 Philosophy of Mind (3.00 cr.)

Repeatable: No

Analysis of philosophical issues concerning the nature of mind, consciousness, and thought, and applications to cognitive science.

Prerequisites: Take PHIL-201 or PHIL-225

PHIL- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

PHOTO – Photography

PHOTO- 130 Introduction to Still and Moving Image Photography (3.00 cr.)

Creative Arts

Repeatable: No

Introduction to the basic visual grammar and critical-thinking skills of still and moving image photography. Cinematic, photographic and visual theory will be addressed, with an emphasis on aesthetics, technical processes, and paradigms of visual literacy. Students will explore concepts, processes and techniques that are applicable to many disciplines. A DSLR camera with full manual control in still and video capture modes is required.

PHOTO- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PHOTO- 204 Exploring Photography (3.00 cr.)

Performing Arts

Repeatable: No

Fundamentals of analog and digital photography with an emphasis on technical processes, principles of composition, aesthetics and paradigms of visual literacy. Students must provide a digital camera with a manually adjustable shutter and aperture.

PHOTO- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PHOTO- 305 Photo Processes (3.00 cr.)

Repeatable: No

Advanced monochromatic photography: aesthetics, advanced theory, view-camera techniques, studio lighting, materials and equipment selection, sheet-film processing, specialized processes and techniques. A special course fee applies.

Prerequisite: take PHOTO-204

PHOTO- 310 Introduction to Photographic Lighting (3.00 cr.)

Repeatable: No

Introduction to the essential concepts of lighting for still and moving image photography. Emphasis is on the application and control of natural and artificial light in studio and location photography. A DSLR camera with full manual control in still and video capture modes is required.

Prerequisite: take PHOTO-130

PHOTO- 311 Advertising And Public Relations Photography (3.00 cr.)

Repeatable: No

A survey of advertising and public relations photography trends and practices. The relationship between photography, typography and design, image capture, manipulation, file management, workflow, output, as well as identifying and meeting client needs and expectations are stressed. A digital SLR camera is required.

Prerequisite: take PHOTO-204

PHOTO- 330 Introduction to Video Production (3.00 cr.)

Repeatable: No

Introduction to essential concepts and techniques of video production. Emphasis is placed on preproduction and preparation for production, writing proposals and treatments, story-boarding and developing a workflow appropriate to the project. Students develop camera operation, audio, lighting, directing, producing and editing skills. A DSLR camera with full manual controls in still and video capture modes is required.

Prerequisite: take PHOTO-130

PHOTO- 335 Film-History And Appreciation (3.00 cr.)

Repeatable: No

Evolution of motion picture film as medium of mass communication and aesthetic expression; contributions of noted film producers.

PHOTO- 340 History Of Photography (3.00 cr.)

Repeatable: No

Survey of the scientific and aesthetic development of photography from its beginnings to the recent practices of photographic technologies in the context of post-modernity. Examine the diversity of styles, techniques, methods, and ideologies of selected photographers focusing on their contributions and influences in advertising, art, fashion, communication technology and pop culture.

PHOTO- 375 Product Photography (3.00 cr.)

Repeatable: No

A survey of the technical and conceptual aspects of still and moving image photography of manufactured goods and products. Emphasis is placed on photographing studio and table still life sets. The importance of lighting for scale, as well as lighting varied surfaces will be explored. A DSLR camera with full manual controls in still and video capture modes is required.

Prerequisite: take PHOTO-130

PHOTO- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PHOTO- 411 Photojournalism and Documentary Photography (3.00 cr.)

Repeatable: No

A survey of the technical and conceptual aspects of photojournalism and documentary photography trends and practices. The importance of still and moving images as conveyors of information and influence on public opinion is emphasized. Ethical and moral considerations, freedom of the press and the public's right to know are stressed. A survey of the technical and conceptual aspects of still and moving image photography of manufactured goods and products. Emphasis is placed on photographing studio and table still life sets. The importance of lighting for scale, as well as lighting varied surfaces will be explored. A DSLR camera with full manual controls in still and video capture modes is required.

Prerequisites: take PHOTO-310 and PHOTO-330

PHOTO- 412 Nature and Landscape Photography (3.00 cr.)

Repeatable: No

A survey of the technical and conceptual aspects of nature and landscape, still and moving image photography trends and practices. Emphasis on the application of appropriate techniques and equipment for field conditions. A special course fee applies. A DSLR camera with full manual controls in still and video capture modes is required.

Prerequisites: take PHOTO-310 and PHOTO-330

PHOTO- 415 Advertising Photography (3.00 cr.)

Repeatable: No

A survey of the technical and conceptual aspects of still and moving image advertising photography trends and practices. The relationship between marketing, design and photography in communicating with target audiences through cross-channel media are stressed. A DSLR camera with full manual control in still and video capture modes is required.

Prerequisite: take PHOTO-375

PHOTO- 421 Architectural and Interior Photography (3.00 cr.)

Repeatable: No

A survey of the technical and conceptual aspects of architectural and interior still and moving image photography trends and practices.

Emphasis on the application of appropriate techniques and equipment for field/location conditions. A DSLR camera with full manual control in still and video capture modes is required.

Prerequisites: take PHOTO-310 and PHOTO-330

PHOTO- 425 Corporate Communications and Public Relations Photography (3.00 cr.)

Repeatable: No

A survey of the technical and conceptual aspects of corporate communications and public relations, still and moving image photography trends and practices. The relationship between marketing, corporate communications and public relations photography in influencing target audience opinion through cross-channel media are stressed. A DSLR camera with full manual control in still and video capture modes is required.

Prerequisites: take PHOTO-310 and PHOTO-330

PHOTO- 430 Video/Cinema Practicum (3.00 cr.)

Repeatable: No

Cross discipline teams explore a selected topic(s) through the completion of professional level video/cinema project(s), from concept to distribution digital media.

Prerequisite: take MEDIA-330

PHOTO- 441 Fashion And Glamour Photography (3.00 cr.)

Repeatable: No

A survey of the technical and conceptual aspects of fashion and glamour still and moving image photography trends and practices. Emphasis on directing professional/non-professional talent/models and creative support and the importance of concept and design in creating effective images. A DSLR camera with full manual control in still and video capture modes is required.

Prerequisites: take PHOTO-310 and PHOTO-330

PHOTO- 495 Professional Portfolio Development (3.00 cr.)

Repeatable: No

Capstone experience for the Applied Photography minor. Students fine tune their direction and concentrate on the area they intend to specialize in their professional career. Students design and produce a portfolio to be evaluated by representative professionals.

Standards of professional practice are emphasized.

Prerequisites: 18 credits of MEDIA courses

PHOTO- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: No

PHYS – Physics

PHYS- 150 The Nature And Application Of Light And Color (2.00 cr.)

Natural Science

Repeatable: No

The nature of light and color: the basic principles of our visual

perception of nature and the arts are presented for students with no formal background in science.

Prerequisite: One year H.S. Algebra and Math placement score required, or MATH-010 or higher.

PHYS- 151 Astronomy (3.00 cr.)

Natural Science with Lab

Repeatable: No

The solar system, stars, galaxies and the universe. Physical processes and observational methods.

PHYS- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PHYS- 211 Introduction To Physics (3.00 cr.)

Natural Science

Repeatable: No

Introduction to principles of physics, including mechanics, fluids, heat and thermodynamics, light and sound, electricity and magnetism; their applications to specific technologies.

PHYS- 212 Introduction To Physics: Lab (1.00 cr.)

Natural Science with Lab

Repeatable: No

Measurement, analysis and presentation of laboratory data on basic physics concepts, including mechanics, fluids, heat, electricity, light and sound.

Corequisite: PHYS-211

PHYS- 222 Heat And Thermodynamics (2.00 cr.)

Repeatable: No

Concepts of temperature and heat, temperature- dependent properties and processes, heat transfer; laws relating heat and other forms of energy.

Prerequisite: take PHYS-231

PHYS- 241 College Physics I (5.00 cr.)

Natural Science with Lab

Repeatable: No

Calculus-based general physics course: mechanics and thermodynamics with laboratory.

Prerequisite: take either MATH-151, MATH-153 or MATH-156

PHYS- 242 College Physics II (5.00 cr.)

Natural Science with Lab

Repeatable: No

Calculus-based general physics course: electricity, sound, light and selected topics in modern physics with laboratory.

Prerequisite: take PHYS-241

PHYS- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the

previous.
Department consent

PHYS- 250 The Physics Of Light And Color (3.00 cr.)

Natural Science with Lab

Repeatable: No

Properties, sources and perception of light are examined through lectures and laboratory activity. Topics considered are: color systems and vision, optical devices and phenomena; and image formation and appearance.

Prerequisite: Take any MATH 100-level or higher

PHYS- 251 Topics In Astronomy (1.00 cr.)

Natural Science

Repeatable: No

Qualitative analysis emphasizing physical principles of selected topics in astronomy. Significance of modern methods of obtaining astronomical information.

PHYS- 252 Neurophysics (4.00 cr.)

Repeatable: No

Examination of physical principles as they relate to brain function and neural systems. Exploration of the physics involved in techniques and technologies used in the study and imaging of the brain.

Math Placement or MATH-120

PHYS- 255 Meteorology (2.00 cr.)

Natural Science with Lab

Repeatable: No

Physical processes that determine properties of the earth's atmosphere: precipitation, atmospheric circulation, weather, climate and human influence on the atmosphere in the framework of physics.

PHYS- 257 Introduction To Geology And Soil Mechanics (3.00 cr.)

Repeatable: No

Physical processes involved in rock formation, mountain building, erosional landscapes, plate tectonics, earthquakes and geologic dating. Elementary soil mechanics.

PHYS- 258 Introduction To Geology (2.00 cr.)

Natural Science

Repeatable: No

Composition of the earth and its physical processes, including geologic time, rocks and minerals, raw resources and energy, volcanism, earthquakes, streams and groundwater, weathering, glaciation, shorelines, deserts, wind, and planetary geology.

PHYS- 281 University Physics I (5.00 cr.)

Natural Science with Lab

Repeatable: No

Calculus-based general physics course: mechanics and thermodynamics with laboratory.

Prerequisite: take either MATH-154 or MATH-157, or may be concurrently enrolled.

PHYS- 282 University Physics II (5.00 cr.)

Natural Science with Lab

Repeatable: No

Calculus-based general physics course: electricity, sound, light, and selected topics in modern physics with laboratory.

Prerequisite: take PHYS-281 or MECH-292

PHYS- 291 Statics (3.00 cr.)

Repeatable: No

Essential elements of statics. Includes vector mechanics, coplanar and non-coplanar force systems, resultants, distributed loads, free-body diagrams, equilibrium conditions, trusses and frames, method of joints, method of sections, and force of inertia.

Prerequisite or co-requisite: MATH-154 or concurrent enrollment

PHYS- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PHYS- 301 Physics for Future Presidents (3.00 cr.)

Natural Science, Global Perspective

Repeatable: No

Science-related topics that a future president must master or any person interested in public policy matters with science content. Terrorism, weapons of mass destruction, energy production, peak oil, nuclear power, radioactivity, environmental degradation, overpopulation, space, satellites, natural disasters, and pseudoscience.

PHYS- 321 Statics And Strength Of Materials (4.00 cr.)

Repeatable: No

Force and moment equilibrium including friction, trusses, frames and machines. Simple and compound stress and strain including beams and joints. No credit for students taking PHYS-325 or PHYS-331.

Prerequisite: take PHYS-241 or PHYS-281

PHYS- 327 Solid State Physics (3.00 cr.)

Repeatable: No

Crystalline structure, lattice vibration and energy states, Brillouin zones, electrons in metals, semi-conductors, and dielectric and magnetic properties of solids.

Prerequisites: take PHYS-282 or PHYS-242, and take MATH-157 or MATH-154

PHYS- 329 Atomic And Nuclear Physics (3.00 cr.)

Repeatable: No

Elements of atomic and nuclear physics.

Prerequisites: take PHYS-242 or PHYS-282, and take MATH-154 or MATH-157

PHYS- 330 Science And The Fallible Mind For Educators (2.00 cr.)

Repeatable: No

Cross-disciplinary, physical science course primarily intended for educators. Defines and examines science with a perspective on societal issues related to the human mind, consumer marketing,

psychology, religion, risk and fear, global concerns, and the use and abuse of numbers. H.S. Algebra required.

PHYS- 333 Dynamics (3.00 cr.)

Repeatable: No

Essential elements of dynamics: rectilinear, angular and harmonic motions; forces producing motion, work, energy, acceleration, impulse and momentum.

Prerequisite: take PHYS-331

PHYS- 335 Optics (3.00 cr.)

Repeatable: No

Optics with emphasis on the wave nature of light: interference diffraction, polarization and coherence; their applications in holography.

Prerequisites: take PHYS-282, or take PHYS-242, MATH-154 and MATH-157

PHYS- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

PHYS- 351 Astrophysics (3.00 cr.)

Repeatable: No

Quantitative and qualitative study of the solar system, stars, galaxies and the universe. Physical processes and observational methods and analysis.

Prerequisite: take PHYS-242 or PHYS-282

PHYS- 358 Soil Science and Conservation (4.00 cr.)

Repeatable: No

Soil formation and the relationship of its physical, chemical, and biological properties to natural and agricultural ecosystems, with implications for sustainable management.

Prerequisites: Take CHEM-135 and PHYS-258

PHYS- 360 Physics Modeling for Game Programmers (3.00 cr.)

Repeatable: No

Use of mathematics and physics to model the physical world for use in games and other computer simulations. Topics include motion, gravity, collisions, vectors, matrices, differential equations, dynamics, hydrostatics, hydrodynamics, and elastic systems to model common game objects.

Prerequisites: take CS-244, MATH-275 and PHYS-281, and take either MATH-154 or MATH-157

PHYS- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PHYS- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

PHYS- 489 Advanced Physics Experience (1.00 - 3.00 cr.)

Repeatable: Yes

Experience leading to a deeper understanding of principles and applications of physics.

Instructor's consent

Must be Junior level or higher

PHYS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PKG – Packaging

PKG- 100 Packaging And Society (2.00 cr.)

Global Perspective

Repeatable: No

A broad overview of the importance of packaging in society.

Introduction to packaging and its interrelationship to multiple disciplines including impact on people and the environment.

PKG- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

PKG- 150 Packaging Fundamentals (3.00 cr.)

Repeatable: No

Explore the purpose of packaging materials and manufacturing methods, including global perspectives, history, environment, market and consumer needs.

PKG- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PKG- 210 Packaging Materials: Paper, Wood, Adhesives, And Metal (3.00 cr.)

Repeatable: No

Technical exploration of paper, wood, adhesives and metal used in packaging worldwide. Material properties and international production processes, applications, environmental impacts of paper, wood, adhesives, and metal.

Prerequisites: take PKG-150 and CHEM-135

PKG- 220 Packaging Materials: Polymers And Glass (3.00 cr.)

Repeatable: No

Technical exploration of polymers and glass used for packaging

worldwide. Material properties, production processes, applications, environmental impacts of polymers and glass.

Prerequisites: take PKG-150 and CHEM-135, BS Packaging students only

PKG- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

PKG- 250 Consumer Packaging Systems (3.00 cr.)

Repeatable: No

The study of packaging from the design concept through production.

Lab work on structural design, sample making, and machine operation. Discussions on standard packages and their applications.

Prerequisites: take PKG-210 and PKG-220

PKG- 260 Distribution Packaging (3.00 cr.)

Repeatable: No

Packaging systems to support the distribution functions. topics will include shipping containers, palletizing, unitizing, barrier problems, marking and coding for shipment, freight regulations, military specifications and hazardous materials regulations.

Prerequisites: take PKG-210 and PKG-220

PKG- 335 Packaging Machinery (3.00 cr.)

Repeatable: No

Weighing, forming, filling, sealing, cartoning, capping, labeling, wrapping, casing, uncasing, palletizing/depalletizing machines as applies to the functional capabilities of speed, materials, containers, and operating functions.

Prerequisites: take PKG-210 and PKG-220

PKG- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

PKG- 350 Packaging Design And Evaluation (3.00 cr.)

Repeatable: No

Chemical and physical protection problems; materials, structure, graphics and regulations in package design; shock and vibration forces in package evaluation; practical applications of evaluation using electronic instrumentation.

Prerequisites: take PKG-250 and PKG-260, and take PHYS-241 or PHYS-281

PKG- 385 Medical Packaging (3.00 cr.)

Repeatable: No

Practical knowledge of special requirements for medical devices and

pharmaceuticals packaging. Discussion and evaluation of package systems, packaging procedures.

Prerequisite: take PKG-250

PKG- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PKG- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

PKG- 450 Food Packaging Laboratory (3.00 cr.)

Repeatable: No

Solve complex problems in food packaging research and development through understanding the interrelationships of food and packaging in laboratory exercises.

PKG- 490 Packaging Development (3.00 cr.)

Repeatable: No

Applications of packaging functions: developing a product's complete packaging system, from final production of product to consumer.

Prerequisites: take PKG-349 and PKG-350

PKG- 495 Packaging Seminar (3.00 cr.)

Repeatable: No

Current packaging problems or developments (subject based on students' interests and current issues).

Prerequisites: PKG-349 and Senior Standing

PKG- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PLE – Plastics Engineering

PLE- 305 Extrusion Theory and Applications (3.00 cr.)

Repeatable: No

Application of advanced theory in extrusion, extrusion blow molding, and thermoforming. Material specifications, part designs, die or mold designs, plasticating process and equipment, and control and monitoring systems will be emphasized.

Prerequisites: take MFGT-250, MFGE-275 and ENGGR-210

PLE- 310 Injection Molding Theory, Design and Application (3.00 cr.)

Repeatable: No

Builds on basic injection molding knowledge with an emphasis on design, process cause and effect, troubleshooting, advanced molding techniques, cycle time reduction efforts, thermal management techniques, and rapid prototyping.

Prerequisites: take MFGT-341, MFGE-275, and ENGGR-210

PLE- 340 Process Simulation and Analysis (3.00 cr.)

Repeatable: No

Concepts of process modeling and simulation including rheological and thermal behavior of polymers during processing. Practical applications are analyzed utilizing commercial simulation software.

Prerequisites: take PLE-305 and PLE-310; Prerequisite or concurrent enrollment: MFGE-391

PLE- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

PLE- 360 Testing and Analysis of Plastics (3.00 cr.)

Repeatable: No

Mechanical, rheological, and thermal properties of plastics. Theoretical principles are combined with laboratory experimentation to identify and characterize plastics in order to evaluate how the properties relate to processing and part performance.

Prerequisites: take MFGE-275, MECH-294, and CHEM-325

PLE- 405 Capstone I: Process/Product Design (3.00 cr.)

Repeatable: No

Design of a product, process, and/or experiment(s) to perform a useful function or solve an industry-based or independent research problem related to plastics engineering. Requires knowledge in research, problem solving, teamwork, communication skills, project management, documentation, and experimentation.

Corequisites: take PLE-340, PLE-360 and INMGT-422 concurrently.

PLE- 410 Capstone II: Process/Product Development (3.00 cr.)

Repeatable: No

A study of process and/or product development through 1) applied research and experimentation, or 2) the design, building, and testing of a product assembly, used to perform a useful function or solve an industry-based/independent research problem. Process documentation and experimental analyses will be emphasized.

Prerequisites: take PLE-405, MFGE-415 (prerequisite or co-requisite), MFGE-363, and MFGE-325

PLE- 420 Transport Phenomena for Plastics Engineers (3.00 cr.)

Repeatable: No

Fluid dynamics and heat transfer applied to plastics processing. Plastic flow behavior as a non-Newtonian fluid with shear heating. Effects of operating conditions and mold/die design on filling behavior, cooling rates, and part characteristics. Finite difference and iterative calculations employed with comparison to fluid flow simulation software.

Prerequisites: take MFGE-275, MFGE-391, and PLE-340 or concurrent enrollment

PLE- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

PLE- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PM – Property Management

PM- 100 Introduction to Property Management (2.00 cr.)

Repeatable: No

Property management industry overview: types of residential and commercial property managed and career paths within the industry. Understanding relationships among property managers, owners and tenants.

PM- 280 Hospitality Facilities Management (3.00 cr.)

Repeatable: No

Applied perspectives on responsible and efficient management of physical plant and equipment demands to achieve maximum guest and tenant satisfaction at acceptable operating costs.

Must be Sophomore level or higher

PM- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

PM- 358 Ethical Decision Making in Property Management (3.00 cr.)

Repeatable: No

Analysis of ethical decisions in property management. Case studies incorporating major laws impacting the property management industry; codes of ethics of major professional societies in property management.

PM- 362 Real Estate Market Analysis and Investment Analysis (3.00 cr.)

Repeatable: No

Analytical tools used for decision making by property managers and the stakeholders they serve. Market and investment analysis and role in providing a financial perspective for the property manager and owner.

Prerequisite: take BUACT-207

PM- 365 Principles of Real Estate (3.00 cr.)

Repeatable: No

Examine real estate issues relating to property ownership, financing,

land use control, transferring interest in real estate through real estate contracts and deeds, leasing and managing property and understanding agents' pre-license and brokerage requirements.

PM- 370 Principles of Property Management (3.00 cr.)

Repeatable: No

Management of commercial, multifamily and common interest development property. Employees, management tools, government involvement, client acquisition and tax requirements.

PM- 371 Commercial/Residential Property Development And Management (3.00 cr.)

Repeatable: No

Exploring factors involved in developing and managing property, both residential and commercial, including undeveloped land. Topics include feasibility studies, financing, appraisal, leases, purchase agreements and management contracts.

Prerequisite: take PM-370

PM- 381 Marketing and Leasing Commercial and Residential Property (3.00 cr.)

Repeatable: No

Effective marketing practices, leasing strategies and tactics designed to attract and retain qualified residential and commercial tenants to income producing properties.

Prerequisite: take PM-370

PM- 396 Valuation of Real Estate (3.00 cr.)

Repeatable: No

Concepts and practical application of real estate appraisal principles including real estate land economics, the three approaches to value (cost, sales comparison, and income) for single family, multi-family and commercial investment properties.

Must be Junior level or higher

PM- 430 Real Estate Law (3.00 cr.)

Repeatable: No

Legal relationships involved in real estate law including owning, leasing, managing and selling interests in real property.

Prerequisite: take BULGL-365

PM- 449 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.

Department consent

PM- 470 Seminar In Property Management (4.00 cr.)

Repeatable: No

Capstone course for Property Management. Preparation of a management plan in the context of a functioning marketplace. Students will seek out and write a management plan that meets the format and content standards for professional accreditation.

Prerequisite: take PM-370 and PM-362

PM- 496 Issues in Multi-family Property Management (3.00 cr.)

Repeatable: No

Contemporary issues affecting residential property management including tax credit housing.

PM- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

POLS – Political Science

POLS- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

POLS- 210 American Government (3.00 cr.)

Racial & Ethnic Studies Category B, Social and Behavioral Sciences - Political Science

Repeatable: No

Structures and processes of national, state and local government in the United States; constitutional framework, political theory and ideology, racial and ethnic dimensions of U.S. political culture, civil rights, media, voting, parties, elections, interest groups, and policy making. Comparisons with selected foreign governments.

POLS- 220 State And Local Government (3.00 cr.)

Repeatable: No

State and local governments within U.S. federal system.

POLS- 240 History and Politics of Africa (3.00 cr.)

Contemporary Issues, Global Perspective, Humanities and the Arts - History, Social and Behavioral Sciences - Political Science

Repeatable: No

Familiarity with cultures and civilizations of Africa, historical roots of modern situations. Emergence of human culture; traditional societies; colonialism and racism; regional persistence; independence and development; civil war and ethnic conflict; participation in a global economy.

POLS- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

POLS- 250 History of Race, Politics and Technology (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category A

Repeatable: No

Historical and contemporary relationships between technology, assessments of technology impacts, studies of differing impacts upon distinct racial, ethnic and socioeconomic groups, and analysis of group differences in access to political and policy-oriented remedies.

POLS- 260 Problems Of U.S. Foreign Policy (3.00 cr.)

Social Responsibility and Ethical Reasoning

Repeatable: No

Analysis of U.S. foreign policy objectives and decision making from both U.S. and foreign perspectives. Historical and contemporary problems of national defense, relationships with different regions and nations, economic and resource policies, presidential/Congressional authority, intelligence operations, and public opinion.

POLS- 270 Introduction To Comparative Government (3.00 cr.)

Global Perspective, Social and Behavioral Sciences - Political Science

Repeatable: No

Analysis and comparison of basic political principles, institutions and problems of major Western, Communist and underdeveloped nations; consideration of alternative approaches to political order and change.

POLS- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

POLS- 310 Political Parties And Elections (3.00 cr.)

Repeatable: No

Analysis of modern political parties. Nominating methods, campaigns, elections. Practical politics in legislative bodies; machines and bosses.

Prerequisite: take POLS-210

POLS- 340 International Relations (3.00 cr.)

Global Perspective, Social and Behavioral Sciences - Political Science

Repeatable: No

The global political system; influence of technology, ideology, ethnicity, national interests, power, morality, multinational business, international organizations, and economic, demographic and ecological patterns; approaches to managing war, violence, economic relations, global pollution and other international problems.

POLS- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

POLS- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

POLS- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring,

supervised work periods, each one building and expanding on the previous.

Department consent

POLS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

POWER – Power

POWER- 103 Power Mechanics (2.00 cr.)

Repeatable: No

Internal and external combustion heat engines, mechanical and fluid transmission systems; present and future applications and limitations. Laboratory work emphasized.

POWER- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

POWER- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

POWER- 260 Introduction To Fluid Power (2.00 cr.)

Repeatable: No

Basic fluid mechanics, pneumatics, hydraulics, control systems and common industrial circuits.

POWER- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

POWER- 303 Mechanical Power Transmission (3.00 cr.)

Repeatable: No

Fundamentals of mechanical power transmission: theory of operation, selection of components, suggestions for application, and analysis of systems.

POWER- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

POWER- 361 Industrial Hydraulics (2.00 cr.)

Repeatable: No

Theory, operation and construction of hydraulic systems and circuits; pumps, reservoirs, lines, control valves and actuators.

POWER- 362 Industrial Pneumatics (2.00 cr.)

Repeatable: No

Theory, operation and construction of pneumatic and pneumatic/hydraulic system components, with application to basic industrial circuits; compressors, plumbing, control valves and actuators.

POWER- 395 Seminar (1.00 - 2.00 cr.)

Repeatable: Yes

Specific content is designed to upgrade competencies of participants. Content will change to reflect current state of the art in electricity/electronics or power mechanics.

POWER- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

POWER- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

POWER- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PSYC – Psychology**PSYC- 100 Psychology Seminar I--Foundations (2.00 cr.)**

Repeatable: No

Fields of study and careers in psychology with focus on development of skills, attitudes, ethics, and habits to successfully master those fields and pursue those careers.

PSYC- 110 General Psychology (3.00 cr.)***Social and Behavioral Sciences - Psychology***

Repeatable: No

Psychology as a discipline and an applied science. Scientific methodology applied to behavior and mental processes. Examines learning, memory, perception, motivation, development, individual and group differences, mental health, the physiological and cultural basis for behavior, and applies psychological principles to human experience.

PSYC- 120 Psychology Of Adjustment (3.00 cr.)

Repeatable: No

Principles, models and theories of psychology applied to understanding self, others, relationships and problems of

contemporary life. Emphasis on healthy and effective personal and interpersonal life coping skills. Strategies and resources for confronting common life adjustment concerns.

PSYC- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved off-campus position to gain professional/business/industrial experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

Must be a Psychology major & have a 2.5 GPA

PSYC- 190 Psychological Research Methods (4.00 cr.)

Repeatable: No

An introduction to research methods used in the behavioral sciences. Lecture and laboratory activities involve applications of methodologies and computer technologies to understand and produce research compatible with American Psychological Association standards.

PSYC- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PSYC- 210 Introduction To Applied Psychology (3.00 cr.)

Repeatable: No

Introduction to the application of psychological theories, methods of investigation, and research findings to a diverse spectrum of social problems. Emphasis is placed on the use of scientific psychology to improve aspects of everyday life.

Prerequisite: Take PSYC-110

PSYC- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved off-campus position to gain professional/business/industrial experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

Must be a Psychology major & have a 2.5 GPA

PSYC- 251 Child Psychology (3.00 cr.)

Repeatable: No

A study of the total psychological development of children emphasizing age groups spanning the pre-school and pre-pubescent child and methods for scientific measurement and understanding of child behavior.

Prerequisite: Take PSYC-110

PSYC- 262D Manage Team Members, Consultant, and Technical Experts (0.10 cr.)

Repeatable: No

Discussion of methods appropriate for managing evaluation team members, consultants, and technical experts involved in a single evaluation.

PSYC- 270 Social Cognition And Behavior (3.00 cr.)

Repeatable: No

Social factors affecting the behavior, thought processes, and attitudes of individuals. Includes attitude assessment and change, prejudice, interpersonal attraction, social influence, aggression, cognitive biases, and attributions.

Prerequisite: Take PSYC-110

PSYC- 280 Forensic Psychology, Law and Ethics (3.00 cr.)

Social Responsibility and Ethical Reasoning

Repeatable: No

Surveys the interface between psychology and law in relation to theoretical and applied cognitive, social, developmental and clinical areas. Psychologists' ethical responsibilities in improving legal, mental health, family and criminal law, and law enforcement domains included. Interventions for victims and offenders addressed. Cultural bias/fairness explored. Focuses on United States.

Prerequisite: Take PSYC-110

PSYC- 281 Psychology for Sustainability (3.00 cr.)

Contemporary Issues, Social Responsibility and Ethical Reasoning

Repeatable: No

Issues impacting environmental and societal sustainability. Factors influencing attitudes towards overconsumption, materialism, and nature. Psychological approaches to understanding and changing individuals, communities, and organizations to create a more sustainable world. Social and ethical imperatives for addressing sustainability.

Prerequisite: take BIO-101 or BIO-111

PSYC- 290 Interpreting Psychological Research (3.00 cr.)

Repeatable: No

Interpretation and evaluation of quantitative statistical arguments presented in psychology- related journals, news, and political discourse; development of analytical and critical thinking skills related to statistical analyses and arguments; interpretation of APA style results sections, including correlation, regression, ANOVA, power and effect size.

Prerequisites: take PSYC-110 and PSYC-190 and take STAT-130 or STAT-320

PSYC- 298 Psychology Field Experience (2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand the major concepts of psychology as they are applied to help solve and prevent human relations type problems.

Department consent

PSYC- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PSYC- 300 Psychology Seminar II - Career Preparation (1.00 cr.)

Repeatable: No

Exploration of post-graduation options for psychology majors.

Development of skills and knowledge for seeking postgraduate employment and/or graduate school admission.

Prerequisites: Take PSYC-100 and PSYC-110

PSYC- 320 Psychology: Its History And Systems (3.00 cr.)

Repeatable: No

History of psychology and influence of early competing schools of thought: structuralism, functionalism, behaviorism, Gestalt psychology, and psychodynamic psychology. Evolution to present as a diverse behavioral science with emphasis on neobehaviorism, humanistic psychology, and cognitive psychology.

Prerequisites: take 9 credits of PSYC, including PSYC-110

PSYC- 325 Psychology of Video Games (3.00 cr.)

Repeatable: No

Psychological factors involved in the development and use of video games. Theoretical and applied factors of cognitive, learning, motivation, development, personality, social, and clinical psychology will be examined.

PSYC- 330 Psychology Of Learning (3.00 cr.)

Repeatable: No

A course designed to acquaint the student with the principles of learning drawn from experimental and theoretical psychology. These principles are demonstrated as they apply to animal and human learning. Modern viewpoints toward theories of learning are emphasized.

PSYC- 333 Drugs and the Brain (3.00 cr.)

Repeatable: No

Comparison of psychoactive drug classes, including drugs used for treatment of psychological disorders, recreational drugs, and illegal drugs, with focus on brain and behavior. Evaluation of role of psychological, biological, and sociological factors in drug use and abuse.

Prerequisite: Take PSYC-110

PSYC- 335 Motivation And Emotion (3.00 cr.)

Repeatable: No

An experimentally oriented introduction to the fundamental principles of motivation and emotion.

Prerequisites: take 9 credits of PSYC, including PSYC-110

PSYC- 340 Psychology Of Individual And Group Differences (3.00 cr.)

Repeatable: No

Nature and extent of differences if individuals and groups are studied. Intelligence, achievement, aptitudes, interests, attitudes, and general personality are the major differences included. Race, sex, nationality, social class and age in relation to individual differences are studied.

Prerequisites: PSYC-110 & 2 PSYC courses

PSYC- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved off-campus position to gain professional/business/industrial experience. Normally entails

recurring, supervised work periods, each one building and expanding on the previous. Department consent

Must be a Psychology major & have a 2.5 GPA

PSYC- 350 Culture and Psychology (3.00 cr.)

Racial & Ethnic Studies Category B, Social Responsibility and Ethical Reasoning

Repeatable: No

Explores relationships among culture, behaviors and mental processes. Addresses cultural commonalities and differences in cognitive processes, such as perception, memory, and language; interpersonal processes such as marriage and childrearing; and mental health problems and treatments. Psychological perspectives on multicultural issues such as race, ethnicity, gender, and sexual orientation.

Prerequisite: take either PSYC-110 or SOC-110 or ANTH-220

PSYC- 351 Children's Social Reasoning (3.00 cr.)

Repeatable: No

Focused, in-depth study of social reasoning from birth through late childhood. Empathy, friendship, altruism, multicultural perceptions, shyness, assertiveness, aggression, loneliness, morality, values, and global responsibility. Heredity/environment-based theories.

Assessment tools and prevention and intervention programs. It is recommended that students will have taken one of the following courses: PSYC-251, HDFS-124, HDFS-264, or PSYC-270.

Prerequisite: take PSYC-110

PSYC- 352 Adolescent Psychology (3.00 cr.)

Repeatable: No

The physical, emotional, social, moral, and intellectual development of secondary school youth. *Prerequisite: Take PSYC-110*

PSYC- 355 Clinical and Counseling Psychology (3.00 cr.)

Repeatable: No

Explores methods by which clinical and counseling psychologists assess and treat psychological problems and promote well-being, applying various psychological theories and research. Addresses similarities/differences of the mental health professions in philosophy, perspectives, typical career choices/duties, and training/licensure requirements. Discusses professional issues and specialty areas.

Prerequisite: Take PSYC-110

PSYC- 360 Personality Theories And Applications (3.00 cr.)

Repeatable: No

Definition of personality and analysis of historical and contemporary approaches to the study of personality. Examines personality theories, personality assessment, cultural and other group difference impacts on personality, applications of personality, and personality self-assessment. *Prerequisites: take 9 credits of PSYC, including PSYC-110*

PSYC- 361 Abnormal Psychology (3.00 cr.)

Repeatable: No

Symptoms, causes, and treatment of various psychological disorders; historical changes in conceptualization and classification

of psychological disorders; ethical, legal, and professional issues associated with psychological disorder diagnosis and treatment.

PSYC- 370 Interpersonal Effectiveness Training (3.00 cr.)

Repeatable: No

Training in effective interpersonal communication attitudes and skills for creating healthy relationships including self-awareness/self-expression; understanding others' communication; assertive rights/responsibilities coping with difficult emotions; conflict management/resolution and mediation; collaborative problem solving and teamwork; gender differences in communication style; effectiveness in relationships with culturally diverse individuals; and effectiveness in online relationships.

PSYC- 371 Introduction To Health Psychology (3.00 cr.)

Repeatable: No

Principles of psychology applied to the promotion of health and wellness; prevention of disease, injury and premature death; psychological treatment of illness; improvement of health care; and formation of health policies.

Prerequisites: must have 10 credits in PSYC courses

PSYC- 372 Psychology Of Sex And Gender (3.00 cr.)

Repeatable: No

Differences and similarities between females and males; psychosocial implications on personal and political status and the resulting influence on identity and self-concept.

PSYC- 375 The Psychology Of Marriage And The Family (2.00 cr.)

Repeatable: No

A study of the interpersonal relations involved in dating, mating and family collaboration with growing awareness of patterns for self-integration.

PSYC- 377 Consumer Psychology (3.00 cr.)

Repeatable: No

Psychological principles and theories from the areas of motivation, perception, learning, attitude, information processing, personality, groups, organizational psychology, and environmental psychology are applied to the understanding of consumer behavior, consumer problems, and their solution.

Prerequisite: Take PSYC-110

PSYC- 379 Public Relations (2.00 cr.)

Repeatable: No

Introduction to public relations in industry and education including community relations, employee relations, customer relations, media relations, tools of public relations, two-way communications, and special publics.

PSYC- 381 Industrial/Organizational Psychology (3.00 cr.)

Repeatable: No

Principles of industrial and organizational psychology with emphases on assessment of individual differences in cognitive, physical and interpersonal abilities as they relate to measurement of work performance, employee selection, training and development methods, and development of organizational methods for improved

motivation, job satisfaction, leadership and organizational effectiveness.

Prerequisite: Take PSYC-110

PSYC- 382 Human Resource Management (3.00 cr.)

Global Perspective

Repeatable: No

Organization and coordination of personnel practices and methods. Consideration given to communication, employment, orientation and training, working conditions, supervision, performance evaluation, collective bargaining, salary administration, health and recreation of a diverse work force employed in domestic and international settings.

PSYC- 390 Experimental Psychology (4.00 cr.)

Repeatable: No

Experimental research methods used in basic and applied areas of psychology. Methodological issues introduced in context of actual research problems for integrated treatment of content and methodology. Students will apply this knowledge by participating in laboratory activities and designing and conducting their own experiments.

Prerequisites: take STAT-130 (or higher) and PSYC-190

PSYC- 391 Applied Psychophysiological Methods (3.00 cr.)

Repeatable: No

Theory, methods, laboratory procedures, and applications of physiological responses to psychological stimuli.

Prerequisite: take BIO-132

PSYC- 398 Psychology Field Experience (2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand the major concepts of psychology as they are applied to help solve and prevent human relations type problems.

Department consent

PSYC- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

PSYC- 401 Workshop: Special Topics In Psychology (1.00 - 3.00 cr.)

Repeatable: Yes

Current specialized topics studied in a small group setting utilizing experimental activities.

Instructor's consent

PSYC- 403 Management Of Employee Reward Systems (3.00 cr.)

Repeatable: No

Review of issues in the reward and compensation of employees and of systematic methods for the determination of employee wages, incentives and benefits. Psychological theories of motivation, external equity, job analysis, identifying compensable factors used in job evaluation, comparable worth and performance appraisal, individual salary determination.

Prerequisite: take PSYC-382

PSYC- 432 Perception (3.00 cr.)

Repeatable: No

This course serves as an introduction to human perception. The content of the course is structured around an information processing model, with the sensory and memory facilities considered as information systems. The student will analyze perceptual research, become familiar with classical and modern psychophysical techniques and conduct experimentation in human information processing.

PSYC- 442 Cognitive Processes (3.00 cr.)

Repeatable: No

Cognitive theories of attention, memory, language, reasoning and problem solving with applications to fields of education, vocational rehabilitation, gerontology, forensic, clinical and counseling psychology.

Prerequisite: Take PSYC-110

PSYC- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved off-campus position to gain professional/business/industrial experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

Must be a Psychology major & have a 2.5 GPA

PSYC- 451 Children's Learning (3.00 cr.)

Repeatable: No

Psychological study of basic learning processes in infants and young children. How and why learning occurs and how the course of learning can be modified; discussed from theoretical, research, and practical orientations including simple behavioral responses, concepts and language. *Prerequisite: Take PSYC-110*

PSYC- 470 Social Influence (3.00 cr.)

Repeatable: No

Types of social influence and analysis of historical and contemporary approaches to the study of social influence. Techniques and impact of social influence in everyday life and resistance to unwanted social influence.

Prerequisite: take PSYC-110

PSYC- 480 Individual Research Project I (1.00 cr.)

Repeatable: Yes

Preliminaries of active research through the development of a research proposal which includes the problem statement, review of the literature and the design of the research project.

Department consent

Prerequisites: take PSYC-210 and PSYC-390

PSYC- 481 Individual Research Project II (1.00 cr.)

Repeatable: Yes

Research in a personal area of interest within the behavioral sciences. Requirements include the completion of a research report which meets APA guidelines.

Department consent

Prerequisite: take PSYC-480

PSYC- 485 Recruitment & Selection Of Human Resources (3.00 cr.)

Repeatable: No

In-depth examination of the processes involved in the design and implementation of procedures for selecting employees; the impact these procedures have on the organization; and recruitment, job analysis, testing methods, legal issues, selection strategies, career development.

Prerequisite: take PSYC-382

PSYC- 498 Psychology Field Experience (2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand the major concepts of psychology as they are applied to help solve and prevent human relations type problems.

Department consent

PSYC- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

RC – Risk Control

RC- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

RC- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

RC- 271 Safety Principles And Practices (3.00 cr.)

Repeatable: No

Principles of accident prevention; school safety programs; identification of resources and content: motor vehicle, home, public, farm, industrial, school, recreational and civil defense.

Department consent

RC- 301 Workshop: Traffic Safety Education Techniques and Management (1.00 cr.)

Repeatable: No

Structured analysis of program management, regulatory, and curricular issues for which traffic safety educators should be conversant.

RC- 301 Context of Current Traffic Safety Education (1.00 cr.)

Repeatable: No

Structured analysis of regulatory, curricular and societal issues in traffic safety education.

RC- 301 Current Issues in Traffic Safety Education (1.00 cr.)

Repeatable: Yes

Structured analysis of regulatory and curricular issues for traffic safety educators.

RC- 371 Alcohol, Drugs And Accident Prevention (3.00 cr.)

Repeatable: No

Impact of alcohol and drug use on accident prevention programs; current efforts to rehabilitate alcohol and drug abusers.

Department consent

RC- 372 Behavior Approach To Accident Prevention (3.00 cr.)

Repeatable: No

Behavioral aspects of accident prevention from physiological, psychological, sociological and cultural perspectives; identifying, understanding and modifying attitudes and behavior.

Department consent

RC- 374 Driver Education Laboratory Methods And Techniques (3.00 cr.)

Repeatable: No

Role, aims and objectives of laboratory programs in driver and traffic safety education; multiple- student teaching techniques, simulation on-street behind-the-wheel and multiple-car driving range experiences provided.

Department consent

RC- 375 Driver And Traffic Safety (3.00 cr.)

Repeatable: No

Classroom phase of driver education: curriculum selection and use, instructional resources and materials, and driver education administration.

Department consent

RC- 381 Principles of Occupational Risk Control/Safety (2.00 - 3.00 cr.)

Repeatable: No

Introduction to risk control/safety approaches intended to protect employee, property, legal, environmental, and financial-based assets through the development of internal practices/standards that promote the systematic anticipation, identification, analysis and control of risks that are inherent to the operation.

Must be Junior level or higher

RC- 383 Occupational Safety and Health Standards (3.00 cr.)

Repeatable: No

Understanding and proper application of a range of regulations and standards relating to occupational safety and health.

RC- 386 Fire Protection (2.00 cr.)

Repeatable: No

Behavior of fire: chemistry, protection, prevention and control.

RC- 387 Human Factors Engineering/Ergonomics (3.00 cr.)

Repeatable: No

Physiological and psychological abilities in human/machine interface, working performance, reliability, comfort and safety; effective design of people and work environment as a cybernetic system.

RC- 388 Construction Safety (3.00 cr.)

Repeatable: No

Overview of construction safety and health, including identification of the most common occupational hazards associated with the construction industry. Emphasis is on evaluating hazards, choosing appropriate controls to protect workers, and developing strategies for implementing these controls into effective management systems.

RC- 389 Fleet Risk Control Management (3.00 cr.)

Repeatable: No

Logistically-oriented management systems required to control risk in fleet operations including internal standards development/analysis, emergency response, accident analysis, loss benchmarking, driver selection and training, vehicle operation, substance abuse testing, hours of service, vehicle maintenance/inspection, route planning, cargo/ personnel security, hazardous materials transportation, and regulatory controls.

*Prerequisite: take either RC-381 or RC-388***RC- 392 Construction Risk Management (3.00 cr.)**

Repeatable: No

Analysis and application of fundamental process steps for construction job site risk management. *Prerequisite: take RC-388*

RC- 395 Emergency Preparedness And Response (3.00 cr.)

Repeatable: No

Specific emergency response plans that meet federal, state and local regulations.

RC- 440 Environmental Leadership & Sustainable Management (3.00 cr.)

Repeatable: No

Examination and evaluation of topics related to environmental regulations, environmental leadership and sustainability management. Environmental and sustainability issues and management challenges will be analyzed and synthesized to provide a fundamental understanding of environmental regulations and management strategies to promote environmental protection and sustainability management.

*Prerequisite: Take RC-383***RC- 449 Cooperative Education Experience (1.00 - 8.00 cr.)**

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring,

supervised work periods, each one building and expanding on the previous.

Department consent

RC- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: No

Department consent

RD – Design, Research & Development**RD- 149 Cooperative Education Experience (1.00 - 8.00 cr.)**

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

RD- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

RD- 205 Design For Industry (3.00 cr.)

Repeatable: No

Industrial Research and Development experiences focusing on problems related to product development, innovation and problem solving, manual, semi-automatic and automatic production processes. Development and application of various systems for selection of materials and processing will be studied.

RD- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

RD- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

RD- 320 Prototype Development And Model Making (3.00 cr.)

Repeatable: No

Introduction to model making and prototype development/construction. Competencies are developed in converting design, research and development and other creative ideas into three- dimensional objects using traditional and non-traditional machining and forming techniques. Three-dimensional design problems form the core of this course.

*Prerequisites: take MFGT-110 or MFGT-150 or PKG-210***RD- 349 Cooperative Education Experience (1.00 - 8.00 cr.)**

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring,

supervised work periods, each one building and expanding on the previous.

Department consent

RD- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

RD- 420 Research And Development (2.00 cr.)

Repeatable: No

Research and development procedures applied to specific industrial material and processing problems.

Concurrent enrollment required in RD-421

RD- 421 Research And Development Laboratory (1.00 cr.)

Repeatable: No

This lab is taken in conjunction with RD-420 to allow students in technical majors to fulfill the requirements of the major research and design project.

Concurrent enrollment required in RD-420

RD- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

RD- 498 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

RD- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

RDGED – Reading Education

RDGED- 382 Content Area Reading (2.00 cr.)

Repeatable: No

Theoretical foundations, policy and issues impacting content area reading. Evidence based strategies for assessing and building background knowledge, developing vocabulary and comprehension, integrating writing, selecting appropriate content area texts and materials, assessing students' reading ability, and addressing needs of diverse students and struggling readers.

Prerequisites: Completion of Benchmark I and EDUC-303

RDGED- 414 Literacy Instruction and Assessment in the Primary Grades (5.00 cr.)

Repeatable: No

Balanced approach to scientifically based literacy instruction in the primary grades to include theoretical frameworks of literacy learning, program organization, effective instructional strategies, assessments, and informal evaluation techniques as related to

instructional planning. Phonemic awareness, phonics, word study, fluency, comprehension, and vocabulary instruction.

Prerequisites for BS ECE students: ECE-421, ECE-435, and ECE-480

Prerequisites for BS Spec Ed students: completion of Benchmark I

REHAB – Vocational Rehabilitation

REHAB- 101 Introduction To Rehabilitation (3.00 cr.)

Repeatable: No

An introduction to serving people with disabilities. Philosophy, history, legislation, concepts and processes, and careers in rehabilitation services.

REHAB- 102 Community Resources (3.00 cr.)

Repeatable: No

Role of community resources in rehabilitation.

REHAB- 149 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved rehabilitation related position to gain experience in provisions of human services. Selection by application and interview.

Department consent

REHAB- 198 Field Experience In Rehabilitation (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand the challenges and potentials of various rehabilitation type careers.

Department consent

Prerequisite: take REHAB-101

REHAB- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

REHAB- 201 Pre Practicum in Rehabilitation (1.00 cr.)

Repeatable: No

Issues related to professional development, ethics, and career awareness in vocational rehabilitation and criminal justice.

Prerequisites: take REHAB-101, REHAB-102, and REHAB-230

REHAB- 205 Rehabilitation Practicum (3.00 - 4.00 cr.)

Repeatable: No

Community based learning in application of rehabilitation concepts and principles. Includes weekly seminar for critique and skill development.

Prerequisites: take REHAB-101 and REHAB-102, both with a C or better.

REHAB- 230 Psychosocial Aspects Of Disability (3.00 cr.)

Repeatable: No

Subjective, objective, ethnic/cultural, and environmental factors related to the disability experience.

Prerequisite: take REHAB-101

REHAB- 249 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved rehabilitation related position to gain experience in provisions of human services. Selection by application and interview.

Department consent

REHAB- 298 Field Experience In Rehabilitation (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand the challenges and potentials of various rehabilitation type careers.

Department consent

Prerequisite: take REHAB-101

REHAB- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

REHAB- 300 Special Topics In Rehabilitation (1.00 - 2.00 cr.)

Repeatable: Yes

Special topics not available through regular courses.

REHAB- 300G Grantsmanship In The Helping Professions (1.00 - 2.00 cr.)

Repeatable: No

Explore grant writing in human service occupations and the necessity for such proposals as an element of change in society. Methods used to seek funding sources and evaluate requests for proposals.

REHAB- 300N Community-Based Rehabilitation Services (1.00 cr.)

Repeatable: No

An examination of national priorities for community-based services designed to enhance competitive employment options for severely disabled persons.

REHAB- 305 Sign Language I (3.00 cr.)

Communication Skills Language

Repeatable: No

Basic course in manual communication with persons who are deaf. Intensive practice in expressive and receptive communication.

REHAB- 306 Sign Language II (3.00 cr.)

Communication Skills Language

Repeatable: No

Intermediate course in manual communication with persons who are deaf. American sign language, increasing sign vocabulary and communication speed.

Prerequisite: take REHAB-305

REHAB- 310 Vocational Assessment Applications in Rehabilitation (3.00 cr.)

Repeatable: No

Common vocational assessment techniques used in rehabilitation settings with diverse populations. Students apply, interpret and

synthesize assessment techniques such as consumer needs analysis, vocational interviewing, psychometric testing, occupational information, behavioral observation and work evaluation techniques to provide client feedback and promote informed career decision making.

Prerequisites: take REHAB-101 and REHAB-102

REHAB- 315 Rehabilitation And Criminal Justice (3.00 cr.)

Repeatable: No

Criminal justice system: process and individual rights. Crime data and criminal law, policing, adjudication. Process roles of corrections and professionals. Disability: demographics, issues and responses.

REHAB- 320 Rehabilitation And Chemical Dependency (3.00 cr.)

Repeatable: No

Chemical use and abuse with emphasis on the rehabilitation of persons who are chemically dependent and the historical and sociological implications of drug usage.

REHAB- 321 Rehabilitation Of Public Offenders (3.00 cr.)

Repeatable: No

Emphasis on programs designed to rehabilitate persons who are public offenders and sociological issues connected with the judicial system.

REHAB- 325 Rehabilitation And Sensory Disability (3.00 cr.)

Repeatable: No

Introduction to persons with hearing and visual impairments or both. Methods and techniques used in sensory disability rehabilitation are discussed.

REHAB- 327 Psychiatric Rehabilitation (3.00 cr.)

Repeatable: No

Goals and processes of psychiatric rehabilitation. Knowledge and application of skills for integrating diagnosis into planning and intervention with a focus on rehabilitation services for individuals with long-term mental illness in community-based settings.

Prerequisites: take REHAB-230 and PSYC-361

REHAB- 333 Adolescent Substance Use And Abuse (2.00 cr.)

Repeatable: No

Major concepts, current trends, and culturally sensitive approaches in the assessment, prevention and treatment of adolescent alcohol and drug addiction.

REHAB- 349 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved rehabilitation related position to gain experience in provisions of human services. Selection by application and interview.

Department consent

REHAB- 350 Independent Living (2.00 cr.)

Repeatable: No

An overview of independent living programs in this country including

evolution, goals, methods of service delivery, and management of the independent living program.

REHAB- 351 Benefits Coordination: Practice And Application (3.00 cr.)

Repeatable: No

Benefits Specialist role and function; rehabilitation content applications. Benefits Program requirements: process and application.

Prerequisite: take REHAB-102

REHAB- 355 Rehabilitation Of The Older Disabled Worker (2.00 cr.)

Repeatable: No

Develop awareness and understanding of older disabled workers with a focus on implementing rehabilitation planning that enables continued participation in the work force or reinsertion into it following disability.

REHAB- 360 Assistive Technology (2.00 cr.)

Repeatable: No

Provision of technology to enhance the lives of persons with disabilities. Delivery system, legislation, and issues related to funding are examined. Specific applications in communication, computers, mobility, and workstations and other technologies are reviewed.

REHAB- 361 Microcomputer Applications In Rehabilitation (2.00 cr.)

Repeatable: No

Applications of microcomputer technology and adaptive devices in vocational evaluation, work adjustment, placement and administration.

REHAB- 365 Laboratory In Rehabilitation Technology (2.00 cr.)

Repeatable: No

Experience utilizing technological aids/devices developed for persons with disabilities. Modify/adapt equipment to meet specific functional requirements. Construct switch/control mechanisms for equipment. Develop prototype solutions to vocational and independent living problems.

Prerequisite: take REHAB-360

REHAB- 398 Rehabilitation Practicum (4.00 cr.)

Repeatable: Yes

Community-based learning in an approved position to further develop skills and understanding of the challenges and potentials of various careers working with persons with disabilities, older adults and/or offenders. Written and oral communication emphasis. Department consent

Prerequisites: take REHAB-201 and COUN-405, each with a grade of "C" or better

REHAB- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

REHAB- 401 Principles And Techniques Of Caseload Management (2.00 cr.)

Repeatable: No

Principles and techniques of implementing case load management in service of clients of state vocational rehabilitation counseling agencies or rehabilitation facilities.

Prerequisite: take REHAB-230

REHAB- 402 Management Of Non-Profit Organizations (3.00 cr.)

Repeatable: No

Principles and practices in the operation of non-profit organizations. Comparison of how non- profit and for-profit operations are affected by organizational structures and authority, budgeting practices, sources of income, personnel issues, strategic planning and program evaluation, and marketing. Application to community agencies.

REHAB- 410 Job Placement Processes (3.00 cr.)

Repeatable: No

Placement theory and methods used to assist people with disabilities to obtain appropriate employment.

Prerequisite: take REHAB-230

REHAB- 420 Psychological Testing of Individuals with Disabilities (3.00 cr.)

Repeatable: No

Use of common psychometric tests with specific emphasis on selection, evaluation, administration, scoring, and interpretation of standardized tests for individuals with disabilities, including those from diverse ethnic and cultural groups.

REHAB- 449 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved rehabilitation related position to gain experience in provisions of human services. Selection by application and interview.

Department consent

REHAB- 452 Group Processes In Rehabilitation Settings (2.00 cr.)

Repeatable: No

Theory and application of group processes in rehabilitation settings; direct experience as member and facilitator of a group.

REHAB- 459 Workforce Development, Disability, And Socioeconomics (3.00 cr.)

Repeatable: No

Macro/micro influences that keep people unemployed and underemployed, including community, services, providers, employers, and families. Interface among legislative initiatives, disability, and life/work. Policy, strategies, and skills that promote effective intervention and change. Intended for professionals in the field.

REHAB- 460 Rehabilitation In The Private Sector (3.00 cr.)

Repeatable: No

Case coordination to support maximum medical recovery and/or vocational rehabilitation of an injured person involved in insurance

funded cases. Differences between public and private rehabilitation processes. Interviewing, planning, assessing transferable skills, placing in suitable work, and communicating with other involved individuals. Business practices, professional roles, and ethical issues.
Prerequisite: take REHAB-310

REHAB- 461 Forensics For The Human Service Professional (2.00 cr.)

Repeatable: No

Terminology and practices associated with forensic for human service professionals. Strategies and materials related to preparation for testimony and expert witness testimony in a court of law and other legal settings.

REHAB- 462 Absence Management (3.00 cr.)

Repeatable: No

Orientation to workers with disabilities in business and industry. Focus on reducing disability related costs, and the elimination of attitudinal and environmental barriers as they pertain to hiring, productivity, and retention of workers with disabilities. Governmental requirements, linkage between business, community resources, and rehabilitation.

REHAB- 470 Work Adjustment Services (2.00 - 3.00 cr.)

Repeatable: No

Principles and procedures of adjustment services. Emphasis upon the change and improvement of behavior. Supervised practical experience in interviewing, behavior observation, individual work adjustment planning, lesson plan development and report writing.
Prerequisite: take REHAB-310

REHAB- 480 Advanced Rehabilitation Practicum (4.00 cr.)

Repeatable: No

Advanced experience in service delivery to persons with disabilities in varied agency/service settings related to student's designated rehabilitation concentration.
Department consent
Prerequisite: take REHAB-398

REHAB- 482 Sexuality And Disability (2.00 cr.)

Repeatable: No

Investigate sexuality as an integral part of the disability experience. Explore programs, techniques and personal biases in relation to sexuality of persons with disabilities.

REHAB- 483 Vocational Counseling Issues (2.00 cr.)

Repeatable: No

Theoretical and applied approaches to vocational counseling and current research in vocational choice and career development as related to vocational counseling.

REHAB- 488 Developing Collaborative Partnerships (3.00 cr.)

Repeatable: No

Development of professional relationships that are characterized by collaboration and respect for the consumer or student. Role of team members including human service professionals, consumer student, family members, school personnel, and community organization

staff in collaborative decision making. Enhanced service delivery responsiveness through application of collaborative principles.

REHAB- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

RUS – Russian

RUS- 101 Elementary Russian I (4.00 cr.)

Communication Skills

Repeatable: No

Elementary Russian for students with no previous training. Students develop a basic working vocabulary; practice dialogue skills and pronunciation; read and write alphabet and numerals; and listen effectively to a Russian speaker.

SCIED – Science Education

SCIED- 409 Broadfield Science Student Teaching (2.00 - 16.00 cr.)

Repeatable: No

Student teaching experiences in science education.

Prerequisites: Benchmark I completed and Senior level

SCIED- 410 Biology Student Teaching (2.00 - 16.00 cr.)

Repeatable: No

Student teaching experience in biology.

Prerequisite: Benchmark II completion

SCIED- 411 Chemistry Student Teaching (2.00 - 16.00 cr.)

Repeatable: No

Student teaching experience in chemistry.

Prerequisite: Benchmark II completion

SCIED- 412 Physics Student Teaching (2.00 - 16.00 cr.)

Repeatable: No

Student teaching experience in physics.

Prerequisite: Benchmark II completion

SCIED- 413 Earth and Space Science Student Teaching (2.00 - 16.00 cr.)

Repeatable: No

Student teaching experience in Earth and space science.

Prerequisite: Benchmark II completion

SCIED- 414 Environmental Science Student Teaching (2.00 - 16.00 cr.)

Repeatable: No

Student teaching experience in environmental science.

Prerequisite: Benchmark II completion

SCIED- 419 Broadfield Science Teaching Internship (2.00 - 16.00 cr.)

Repeatable: No

Internship experience in teaching broadfield science.

Prerequisite: Benchmark II completion

SCIED- 420 Biology Teaching Internship (2.00 - 16.00 cr.)

Repeatable: No

Internship experience in teaching biology.

Prerequisite: Benchmark II completion

SCIED- 421 Chemistry Teaching Internship (2.00 - 16.00 cr.)

Repeatable: No

Internship experience in teaching chemistry.

Prerequisite: Benchmark II completion

SCIED- 422 Physics Teaching Internship (2.00 - 16.00 cr.)

Repeatable: No

Internship experience in teaching physics.

Prerequisite: Benchmark II completion

SCIED- 423 Earth and Space Science Teaching Internship (2.00 - 16.00 cr.)

Repeatable: No

Internship experience in teaching earth and space science.

Prerequisite: Benchmark II completion

SCIED- 424 Environmental Science Teaching Internship (2.00 - 16.00 cr.)

Repeatable: No

Internship experience in teaching environmental science.

Prerequisite: Benchmark II completion

SCIED- 488 Internship Teaching - Science Education (8.00 - 16.00 cr.)

Repeatable: No

Alternative to student teaching experience: licensed and salaried internship in a cooperating school.

Department consent

Prerequisites: Benchmark II completion and Senior level

SCOUN – School Counseling

SCOUN- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SCOUN- 301 Introduction To Guidance (2.00 cr.)

Repeatable: No

Policies and practices of organized guidance programs in educational settings; historical, philosophical and cultural bases for guidance services; guidance techniques for teachers; cooperative efforts of teachers, parents and counselors.

SCOUN- 400 Workshop: Counseling/Psychological Services (1.00 - 3.00 cr.)

Repeatable: Yes

SCOUN- 405 Emerging Issues In School Counseling (2.00 cr.)

Repeatable: No

Identify, explore and research issues and trends impacting practice

and resources in school counseling. Student must be currently employed in a school setting or licensed to work in schools.

SCOUN- 447 Emotional And Behavioral Problems Of Children And Adolescents (3.00 cr.)

Repeatable: No

Assessment, identification and evaluation of emotional and behavioral disorders of learners middle childhood through adolescence, including methods of observing, diagnosing, documenting and interpreting. Characteristics of emotional and behavioral disabled learners, including potential concomitant physical, cognitive, or sensory disabilities and psychological, social and environmental factors contributing to childhood emotional and behavioral disorders.

SCOUN- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SMGT – Sustainable Management

SMGT- 115 Environmental Science and Sustainability (3.00 cr.)

Repeatable: No

The interrelationships between humans and the environment. Important ecological concepts, human influence on the environment, and sustainable practices to avoid or ameliorate negative impacts. Ecological concepts are used throughout to identify, understand, and provide a better understanding of how humans can more positively affect the environment in which they live. *B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

SMGT- 220 Systems Thinking (3.00 cr.)

Repeatable: No

Use of systems thinking to apply the concept of sustainability in various business, social, and scientific contexts. Rather than looking at a problem by analyzing component parts, students learn to analyze whole systems. Students model relationships and behaviors to identify leverage points for change.

B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 230 Triple Bottom Line Accounting for Managers (3.00 cr.)

Repeatable: No

Financial and managerial accounting and how this information is used. Basic preparation of financial statements and their analytical use. How accounting information is applied by managers in decision-making process helping organizations meet the triple bottom line: strong profits, healthy environment, and vital communities.

Prerequisite: College Algebra. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 235 Economics in Society and Sustainability (3.00 cr.)

Repeatable: No

Economic, social, and environmental issues facing society. Traditional issues such as markets and prices (microeconomics), government economic management (macroeconomics), and international trade. Introduction of economic content into analysis of selected topics such as poverty and discrimination, the environment, and the provision of government services. Critiques of conventional economic thought, within the context of systems thinking and ecological economics, and integrated throughout the course.

Prerequisite: College Algebra. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 240 Technical Writing for Sustainable Management (3.00 cr.)

Repeatable: No

The psychology and mechanics of written business communications are thoroughly explored and widely applied. Also included are non-written applications in such business areas as international/intercultural, nonverbal, and ethical communications. *B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.*

SMGT- 310 Ecology For Sustainable Management (3.00 cr.)

Repeatable: No

Interrelationships of organisms with each other and their environments. Investigation into composition and dynamics of populations, communities, ecosystems, landscapes, and the biosphere with emphasis on sustainability. Enrollment in online Sustainable Management degree program required.

Prerequisite: BIO-101. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 315 Global Environmental Chemistry (3.00 cr.)

Repeatable: No

An exploration of chemical environments as interdependent thermodynamic and kinetic systems. The system/surroundings perspectives of thermodynamics will be applied to systems of progressively larger sized in order to arrive at the comprehensive view of the global environmental system.

Prerequisite: General Chemistry. For B.S. in Sustainable Management majors only or with permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 320 Energy for Sustainable Management (3.00 cr.)

Repeatable: No

Learn to apply basic engineering principles to existing and emerging energy technologies to provide a better understanding of energy production, consumption, and environmental impact; and how these principles relate to sustainable management. topics cover a wide range of energy systems including nuclear, fossil fuels, wind, solar, biofuels and biomass.

Prerequisite: General Chemistry. For B.S. in Sustainable Management

majors only or with permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 325 Natural Resource Management (3.00 cr.)

Repeatable: No

The interdependence between natural resources associated with land, air, and water. Explores significant environmental issues regarding the policies and problems in the use and management of natural resources related to soils, vegetation, landscape within the context of social needs and sustainability.

B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 330 Marketing for a Sustainable World (3.00 cr.)

Repeatable: No

Analysis of an organization's opportunities to develop sustainability practices as they relate to the development of product, pricing, supply and distribution channels (retail, wholesale), promotion (advertising, sales promotion, public relations) and target markets.

Prerequisite: take SMGT-235. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 331 Sustainable Organizational Finance (3.00 cr.)

Repeatable: No

Introduction to the theory and methods of sustainable organizational finance. topics include financial statements; discounting and budgeting; uncertainty and risk/reward trade-offs; and assessing financial implications of the triple bottom line (e.g., climate change, carbon trading, human resource management, and creating environmentally-conscious shareholder value).

Prerequisites: Statistics, SMGT-230, and SMGT-325. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 332 Economics of Environmental Sustainability (3.00 cr.)

Repeatable: No

Interaction between market activity and the environment, applies economic analysis to the efficient and sustainable management of environmental goods and resources, and examines how economic institutions and policies can be changed to bring the environmental impacts of economic decision-making more into balance with human desires and the needs of the ecosystem.

Prerequisite: take SMGT-235. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 335 Management and Environmental Information Systems (3.00 cr.)

Repeatable: No

Use of the computer as a problem-solving tool, as part of data processing systems; information systems and decision support tools for managers; information systems planning and development; overview of computer hardware, software, database management, networking and web technologies; green data centers; energy

efficient trends in information technology; data and information usage in green businesses.

Prerequisites: Take Statistics and SMGT-230. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 340 Organizational Behavior and Sustainability (3.00 cr.)

Repeatable: No

Management principles and theories underlying human behavior in organizations are investigated. Topics include personality, motivation, communication, decision-making, leadership, teamwork, ethics, power, diversity, and work stress. Constraints and opportunities of an "eco" friendly organization are realized.

Prerequisite: Introductory Speech/Communication course. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 350 Operations Management and Sustainability (3.00 cr.)

Repeatable: No

The role of the operations function in an organization; linear programming; continuous and intermittent production processes; aggregate planning; inventory control; materials management; scheduling; project management; quality assurance; operations for green enterprises.

Prerequisites: take STAT-130 and MATH-120. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 360 Environmental and Sustainability Policy (3.00 cr.)

Repeatable: No

Topics include the spectrum of historical, theoretical and technical issues applicable to sustainable management of natural resources, environmental quality standards and risk management.

Administrative structures the form the basis for selecting appropriate responses to complex management problems faced by industry, government and non-governmental agencies are identified. The historical development and current framework of public policy are investigated, and specific foundational legislation is critiqued.

Prerequisites: take SMGT-115. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 370 Logistics, Supply Chain Management, and Sustainability (3.00 cr.)

Repeatable: No

Concepts, functions, processes, and objectives of logistics and supply chain management activities. Activities involved in moving raw materials, inventory, and finished goods from point of origin to point of use or consumption. Planning, organization and controlling such activities. The role of supply chain processes in creating sustainable competitive advantage with respect to quality, flexibility, lead-time, and cost. Customer service, inventory management, transportation, warehousing, supply; chain management, reverse logistics, green supply chains, and international logistics.

Prerequisite: take SMGT-350. B.S. in Sustainable Management

majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 430 International Management for a Sustainable World (3.00 cr.)

Global Perspective

Repeatable: No

Analysis of the theory and practice of managing international organizations. This includes socio-cultural aspects and group dynamics of international business and service organizations through the study of sustainable management practices - strong profitability, healthy environment, vital communities.

Prerequisite: take SMGT-235. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 435 International Development and Sustainability (3.00 cr.)

Repeatable: No

Historical roots of the idea of development, economic theories of growth and their implications for sustainability, and interrelationships between population growth, food security, poverty, inequality, urbanization, technological change, international trade and environmental change at local, regional and global scales. Contemporary issues and alternatives.

Prerequisite: take SMGT-235. For B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 460 Environment and Society (3.00 cr.)

Repeatable: No

Introduce the fundamentals of human-environmental interaction; a grasp of how these interactions create problems; and how the elements of social, technological, and personal choices combine to overcome them.

Prerequisites: take SMGT-115. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SMGT- 495 Sustainable Management Capstone (3.00 cr.)

Repeatable: No

Application and study of sustainable management through the solution of an industry-based project. Implementation of a triple-bottom line solution to industrial or community-based problems will be emphasized.

Must be Senior level. B.S. in Sustainable Management majors only or permission of Sustainable Management program director. Obtain valid permission number for registration.

SOC – Sociology

SOC- 110 Introductory Sociology (3.00 cr.)

Global Perspective, Social and Behavioral Sciences - Sociology

Repeatable: No

Social interaction in human groups; relationships between individual and group; social inequality; basic social institutions, social change and current social trends; the socio-cultural diversity of groups; the

infrastructure and interrelationships of social organizations; and alternative theoretical perspectives for explaining these social phenomenon.

SOC- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SOC- 225 Social Problems (3.00 cr.)

Racial & Ethnic Studies Category B, Global Perspective, Social and Behavioral Sciences - Sociology

Repeatable: No

Sociological analysis of current social problems in the U.S. and the world.

SOC- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

SOC- 250 Social Psychology (3.00 cr.)

Contemporary Issues

Repeatable: No

Theory and application of social interaction; emphasis on communication.

SOC- 275 Sociology Of Gender Roles (3.00 cr.)

Racial & Ethnic Studies Category B

Repeatable: No

Sociological analysis of social roles played by the sexes.

SOC- 290 Global Political Ecology (3.00 cr.)

Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Social, political, and economic origins of contemporary environmental problems from sociological, anthropological and geographic perspectives; social construction of nature and knowledge; environmentalism, environmental racism and environmental justice in cross-cultural perspective; ethical implications of contemporary environmental problems regarding perspectives and distributions of justice.

SOC- 291 Sociology of Health and Illness (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category A, Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Sociological approaches to health and illness, both domestically and globally, with special emphasis on race and health. Topics include the social distribution of illness; health disparities across race/class/gender; global comparisons in the health of populations; the social construction of illness; the history and structure of health care systems and institutions; and various historical and contemporary health care debates. Health and illness will be considered throughout in terms of social justice and responsibility.

SOC- 293 Environmental Justice (3.00 cr.)

Racial & Ethnic Studies Category A, Social Responsibility and Ethical Reasoning

Repeatable: No

Environmental racism; socio-economic inequality and exposure to environmental hazards; race, class, and environmental suffering; grassroots activism and opposition to environmental inequality and racism, particularly among U.S. minority groups; incorporation of environmental justice principles into public policy and corporate decision-making.

SOC- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SOC- 310 Sexualities in Historical and Social Perspective (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category B

Repeatable: No

Sociology and history of sexual identities and categories and their uses to justify public policy; the normative and institutional context of how power is exercised in relation to sexuality, especially the stratification of society based on sexuality. Contemporary controversies such as gay marriage and other civil rights issues.

Must be Sophomore level or higher

SOC- 315 Criminology (3.00 cr.)

Repeatable: No

Sociological analysis of structure and function of criminal law, variables of criminal behavior and operation of criminal justice system.

Prerequisite: take SOC-110

SOC- 320 Social Movements in Global Perspective (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category B, Global Perspective

Repeatable: No

Social movements, collective action and activism; indigenous rights, labor organizing, civil rights, gender- and sexuality-based struggles, racial/ethnic identity formation and the claiming of rights, and anti-globalization activism in the U.S. and internationally; contested meanings of justice, citizenship, and democracy in a context of global capitalism.

SOC- 325 Sociology Of Leisure (3.00 cr.)

Contemporary Issues, Social Responsibility and Ethical Reasoning

Repeatable: No

Explanations of recreation and leisure structures and processes from multiple theories within sociology and economics; comparative case studies of recreation and leisure; ethical implications of how recreation and leisure are encouraged and pursued in a modern capitalist system, considering various philosophical perspectives of justice.

SOC- 330 Social Theory (3.00 cr.)

Repeatable: No

Learning and applying advanced sociological and anthropological theories to social issues. Understanding various tools of explanation

in the social sciences, as well as their origins, assumptions, and specific ways-of-knowing. Building a theoretical toolkit with the ability to compare, evaluate and synthesize theories for particular applications.

SOC- 340 Sociology Of Work (3.00 cr.)

Repeatable: No

Human behavior in various types of employment and occupations; trends in U.S. occupational structure.

SOC- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

SOC- 350 Sociology Of Hmong Culture (1.00 cr.)

Repeatable: No

Sociological overview of Hmong cultural values, history, immigration and resettlement experiences, family and clan functions, and spiritual beliefs and practices.

SOC- 360 Sociology Of Juvenile Delinquency (3.00 cr.)

Repeatable: No

Theories of delinquency, criminal behavior, and social control in relation to modern institutions in American culture.

Prerequisite: take SOC-110

SOC- 375 Sociology Of Minority Groups (3.00 cr.)

Racial & Ethnic Studies Category A, Global Perspective

Repeatable: No

Social/psychological aspects of interaction between majority and minority groups; trends among minorities in the United States.

SOC- 385 Globalization and Social Change (3.00 cr.)

Contemporary Issues, Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Explanations of globalization processes and global governance from multiple perspectives among the social sciences, including sociology and economics; historical origins of global processes and structures; global social change and resistance; ethical implications of globalization outcomes regarding perspectives and distributions of justice.

SOC- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SOC- 400 Sociology Of Altruism (3.00 cr.)

Social and Behavioral Sciences - Sociology

Repeatable: No

Sociological perspective of altruism explored in the context of volunteer public service, and biographies of exemplary public service

participants.

Department consent

Prerequisite: Acceptance into University Honors Program

SOC- 410 Sociology Of Thailand's Minority Groups: Study Abroad Program (4.00 cr.)

Global Perspective

Repeatable: No

Study abroad program to Thailand. In-depth experiential learning of Thai minority cultures, including religions, socio-political status, Buddhism, health, education, trafficking of women and children, limited citizenship status, and poverty. Field trips to villages, non-governmental agencies, schools, and clinics.

SOC- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

SOC- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SOCWK – Social Work

SOCWK- 205 Introduction To Social Work (3.00 cr.)

Repeatable: No

Social work as a profession; history and philosophy of social services; information for teachers, counselors and those interested in the field.

Prerequisite: take SOC-110

SOCWK- 420 Human Behavior and Social Environment (3.00 cr.)

Repeatable: No

Biological, ecological, sociological, cultural, psychological and spiritual development focused on the social systems of the individual, family, group, organizational and community; structures used to promote or deter health and well-being. Human development within the social environment from micro, meso and macro perspectives and theoretical frameworks. Apply core social work competencies.

Prerequisite: take SOC-110

SOCWK- 430 Social Casework Methods (3.00 cr.)

Repeatable: No

Dynamics of social casework: mobilizing individual capacities and community resources to promote adjustment between client and environment; social change.

Prerequisite: take SOC-110

SOCWK- 440 Social Work Practice with Groups and Families (3.00 cr.)

Repeatable: No

Focus on assessment and intervention strategies with groups and families. Explore family dynamics and intervention strategies with an emphasis on strengths perspective. Theories of process group dynamics, the role of a group leader, and stages of group development, with a focus on cultural competence when working with groups and families.

SOCWK- 450 Macro Social Work Practice (3.00 cr.)

Repeatable: No

Macro perspective in Social Work; person-in-environment; how to intervene and implement change. Systems theory, ecology theory, human behavior theories, assessment, planning, intervention and evaluation. Effect of policies on clients and social workers; how to lobby and write policies. Ethical dilemmas and ANSW Code of Ethics.

Prerequisite: SOCWK-205

SOCWK- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SPAN – Spanish

SPAN- 103 Elementary Spanish I (4.00 cr.)

Communication Skills Language, Foreign Language Global Perspective

Repeatable: No

Understanding, speaking, reading and writing in Spanish. Culture of Spanish-speaking peoples, including those in the United States. Grammatical gender, present and past tense verbs, pronouns, adjectives. Supplementary work with audiotapes and computers. Not available for credit to students who took SPAN-121 or SPAN-122. Only one Spanish course counts toward Ethnic Studies.

Not available for credit to students who took SPAN-121 or SPAN-122

SPAN- 104 Elementary Spanish II (4.00 cr.)

Communication Skills Language, Foreign Language Global Perspective

Repeatable: No

Second level of understanding, speaking, reading and writing in Spanish. topics in the culture of Spanish-speaking people, including those in the United States. Compound verb tenses, the subjunctive and commands. Supplementary work with audiotapes and computers. Requires one year of H.S. Spanish or SPAN-103 or SPAN-122.

Prerequisites: One year of H.S. Spanish, or SPAN-103, or SPAN-122

SPAN- 121 Practical Spanish I (2.00 cr.)

Foreign Language Global Perspective

Repeatable: No

Pronunciation, basic phrases for everyday situations, comprehension and production of short written and spoken sentences, basic grammar summary, introductory vocabulary, language in Hispanic and Hispanic-American cultural context. Not available for credit to students who took SPAN-103. Only one Spanish course counts toward Ethnic Studies.

Not for credit to students who took SPAN-103.

SPAN- 122 Practical Spanish II (2.00 cr.)

Communication Skills Language, Foreign Language Global Perspective

Repeatable: No

Second quarter college Spanish. Vocabulary, conversational patterns, irregular present tense verbs, regular and some irregular preterite verbs; object pronouns. Spanish language in the context of Hispanic culture. Not available for credit to students who took SPAN-103. One semester of H.S. Spanish or SPAN-121 is required. Only one Spanish course counts for Ethnic Studies.

Prerequisite: take SPAN-121; not available for credit to students who took SPAN-103.

SPAN- 201 Intermediate Spanish I (4.00 cr.)

Foreign Language and Culture, Foreign Language Global Perspective

Repeatable: No

Extensive development of vocabulary including common idioms, aural comprehension, correct pronunciation and recognition of verb tenses. Readings and class discussion based on historical background and contemporary Hispanic life, including Hispanic culture in the United States. Two years of H.S. Spanish or SPAN-104 is required. Only one Spanish course counts for Ethnic Studies.

Prerequisite: 2 years of H.S. Spanish or SPAN-104

SPAN- 202 Intermediate Spanish II (4.00 cr.)

Communication Skills Language, Foreign Language Global Perspective

Repeatable: No

Complete grammar review of standard Spanish, applicable to both conversational situations and business or personal correspondence. Review of essential vocabulary and phrases. Accuracy and fluency in spontaneous conversation and free composition. SPAN-104 or three years of H.S. Spanish is recommended. Students may incur incidental expenses for software.

Prerequisite recommendation: SPAN-104 or at least 3 years of HS Spanish

SPAN- 227 Spanish Composition And Conversation I (2.00 cr.)

Communication Skills Language, Foreign Language Global Perspective

Repeatable: Yes

Fifth semester college Spanish. Advanced grammar review. Introduction to composition. Writing paragraphs and short essays. Advanced conversation. Emphasis on native-like pronunciation, vocabulary and structural fluency. Only one Spanish course counts as Ethnic Studies. SPAN-202 or four years of H.S. Spanish is required.

Prerequisite: 4 years of H.S. Spanish or SPAN-202

SPAN- 229 Hispanic Literature In America (2.00 cr.)

Foreign Language and Culture, Racial & Ethnic Studies Category B, Foreign Language Global Perspective

Repeatable: No

Sixth semester college Spanish. Themes and techniques of Hispanic literature. Vocabulary in Spanish for discussion of a variety of literary genres. Historical and cultural contexts. Emphasis on increasing oral and written fluency in Spanish. SPAN-202 or four years of H.S.

Spanish is required.

Prerequisite: 4 years of H.S. Spanish or SPAN-202

SPAN- 299 Independent Study (1.00 - 3.00 cr.)

Foreign Language Global Perspective

Repeatable: Yes

Department consent

SPAN- 304 Latin American Short Story (2.00 cr.)

Foreign Language and Culture, Foreign Language Global Perspective

Repeatable: No

Introduction to the 20th and 21st century Latin American short story. Vocabulary and readings in Spanish of prominent authors and distinct literary periods of this genre. Related historical and cultural contexts. Taught in Spanish. SPAN-202 or four years of H.S. Spanish is required.

Prerequisite: 4 years of H.S. Spanish or SPAN-202

SPAN- 318 Cinema For Spanish Proficiency (2.00 cr.)

Foreign Language Global Perspective

Repeatable: No

Sixth semester college Spanish course on topics for language practice. Outstanding films from the Spanish-speaking world on themes of cultural relevance; advanced composition; advanced conversation and discussion. Taught in Spanish.

Prerequisite: take SPAN-227

SPAN- 399 Independent Study (1.00 - 3.00 cr.)

Foreign Language Global Perspective

Repeatable: Yes

Department consent

SPAN- 499 Independent Study (1.00 - 3.00 cr.)

Foreign Language Global Perspective

Repeatable: Yes

Department consent

SPCOM – Speech Communication

SPCOM- 100 Fundamentals of Speech (2.00 - 3.00 cr.)

Communication Skills - Speaking

Repeatable: No

Techniques of effective speech: diagnosis of individual needs and training in necessary skills; speaker/listener relations, speech organization, voice, bodily action, language and development of confidence and poise.

SPCOM- 101 Forensics (1.00 - 2.00 cr.)

Repeatable: Yes

Training in speech through instruction in and application of the principles used in intercollegiate forensics program: oral interpretation and original and limited- preparation events.

Department consent

SPCOM- 102 Forensics (1.00 - 2.00 cr.)

Repeatable: Yes

Training in speech through instruction in an application of the principles used in intercollegiate forensics program: oral interpretation and original and limited- preparation events.

Department consent

Prerequisite: take SPCOM-101

SPCOM- 103 Forensics (1.00 - 2.00 cr.)

Repeatable: Yes

Training in speech through instruction in an application of the principles used in intercollegiate forensics program: oral interpretation and original and limited- preparation events.

Department consent

Prerequisite: take SPCOM-102

SPCOM- 104 Forensics (1.00 - 2.00 cr.)

Repeatable: Yes

Training in speech through instruction in and application of the principles used in intercollegiate forensics program; specific emphasis on forensics administration.

Department consent

Prerequisite: take SPCOM-103

SPCOM- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SPCOM- 200 Persuasive Speaking (2.00 cr.)

Communication Skills - Speaking

Repeatable: No

Advanced techniques of speaking; develop skill in audience analysis, speech composition and delivery of various types of speeches; recognize techniques used daily toward individuals and groups.

Prerequisite: take SPCOM-100

SPCOM- 206 Discussion (2.00 cr.)

Communication Skills - Speaking

Repeatable: No

Principles and techniques of discussion; leading and participating in symposium, panel, roundtable and other discussion forms.

SPCOM- 208 Theory Of Communication (3.00 cr.)

Communication Skills - Speaking

Repeatable: No

How people communicate with each other; interpersonal, social, technical and business communication, monographs of various communication theorists.

Prerequisite: take SPCOM-100

SPCOM- 210 Interpersonal Speech Communication (2.00 cr.)

Communication Skills - Speaking

Repeatable: No

Basic aspects of non-structured, informal speech communication; expression of feelings and intentions and processing of relationships.

SPCOM- 236 Listening (2.00 cr.)

Communication Skills - Speaking

Repeatable: No

Theoretical analysis and practical application of listening concepts.

Emphasis on assessment of individual listening skills and methods of improving personal listening techniques used in occupational and personal relationships.

SPCOM- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SPCOM- 308 Speech Skills For Business And Industry (2.00 cr.)

Repeatable: No

Professional communication; projects emphasizing the application of oral presentation skills in business and professional contexts.

SPCOM- 312 Intercultural Communication (3.00 cr.)

Contemporary Issues, Communication Skills, Racial & Ethnic Studies Category A, Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Communication concepts and strategies in a global multicultural society examining domestic racial and ethnic groups: communication norms in cultures of origin and functional appreciation of cultural diversity in social networks using verbal, nonverbal and group communication. Relevant concepts include identity formation, perception, worldview context, social stratification, racism, ethics, and language.

Prerequisite: take SPCOM-100

SPCOM- 350 Nonverbal Communication (3.00 cr.)

Repeatable: No

Theories and research involved in understanding and applying nonverbal skills in personal, professional and technologically-enhanced environments.

SPCOM- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SPCOM- 400 Special topics In Communication Seminar (1.00 - 3.00 cr.)

Repeatable: Yes

Current issues or historical topics related to communication. Specific topic will be advertised prior to semester offered. Course may be repeated three times with different topics or issues.

Prerequisite: take SPCOM-100. Must be Junior level or higher

SPCOM- 414 Interviewing (1.00 cr.)

Repeatable: No

Principles and techniques for interviewee in employment interviews.

SPCOM- 425 Informational Interviewing Skills for Professionals (1.00 cr.)

Repeatable: No

Theories and methodologies used in the collection and interpretation of data for research and professional development purposes.

Prerequisite: take SPCOM-100

SPCOM- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SPED – Special Education

SPED- 100 Introduction To Special Education (1.00 cr.)

Repeatable: No

Introduction to the special education profession. Survey of the history, philosophy, mission, legislation, issues, organization, and resources associated with the profession; and introduction to the professional standards and content guidelines.

SPED- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SPED- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SPED- 300 Introduction To Individuals With Cognitive Disabilities (3.00 cr.)

Repeatable: No

Introduction to etiology of mental retardation; psychological, educational, social and vocational aspects; adjustment techniques used in working with mentally retarded persons.

SPED- 301 Learning Disabilities (3.00 cr.)

Repeatable: No

Identification, remediation and evaluation of learning disabled; intervention techniques used with adolescents and adults.

SPED- 305 Early Childhood Inclusion of Students with Exceptional Needs (3.00 cr.)

Repeatable: No

History and purpose of Early Childhood Special Education. Programming; legislation; population receiving services; adaptations; strategies; family intervention; intervention models; inclusion of all students in the natural environment or least restrictive environment.

Prerequisite: take ECE-100

SPED- 310 ECSE Methods, Materials and Curriculum (3.00 cr.)

Repeatable: No

Curricular and methodological adaptation; embedding goals and objectives for young children with exceptional needs in the areas of social-emotional development, motor skills, self-help skills, communication, cognitive development.

Prerequisite: take SPED-305

SPED- 315 Early Childhood Special Education Organization and Implementation (3.00 cr.)

Repeatable: No

Organization and implementation of Early Childhood Special Education programs. Service delivery; itinerant services;

consultation and collaboration; and intervention models.

Prerequisite: take SPED-305

SPED- 320 Early Childhood Special Education Assessment (3.00 cr.)

Repeatable: No

Supervised practice in assessment of young children with suspected or identified developmental delays. Standardized and informal assessment instruments for screening; determining eligibility for special needs programming; and progress monitoring of early learning in early childhood children.

Prerequisites: SPED-305, SPED-310, and SPED-315

SPED- 322 Curriculum & Instruction: Severe Disabilities (2.00 cr.)

Repeatable: No

Curriculum and instruction strategies for teaching functional academics, personal/social, vocational, and community living skills to individual with severe and profound disabilities.

Prerequisite: Benchmark I completion, SPED-300 and SPED-430

SPED- 323 Mild Disabilities: Social Studies And Science (3.00 cr.)

Repeatable: No

Curriculum and methods of teaching students with mild cognitive, learning, and emotional/behavioral disabilities in the content areas of social studies, science, and in general education. Strategies that facilitate integration, improve maintenance and generalization of skills, promote transitions, increase self-awareness and self-management, and compensate for learning deficits.

Prerequisites: must have completed Benchmark 1, and take SPED-300, SPED-301, SPED-430

SPED- 324 Curriculum & Instruction: Career & Transition Education (3.00 cr.)

Repeatable: No

Curriculum and instruction for persons with disabilities in prevocational, career education, career preparation, and transition, stressing collaboration between education, community-based service providers, and families.

Prerequisite: Benchmark I completion, SPED-300 and SPED-430

SPED- 326 Pre-Student Teaching: Cognitive Disabilities (2.00 cr.)

Repeatable: Yes

Supervised experience in observing, planning instruction, and teaching children and youth with cognitive disabilities in a cross-categorical school environment. Repeatable three times for credit. Department consent

Prerequisites: Benchmark 1 completion and SPED-300

SPED- 328 Assessment For Individual Education/ Transition Plans (3.00 cr.)

Repeatable: No

Diagnosing behavior and learning problems of students with exceptional education needs. Preparing individual educational and transitional plans based on comprehensive assessments.

Benchmark I Completed

SPED- 330 Introduction To Communication Disorders (3.00 cr.)

Repeatable: No

Nature, causes of and methods used when working with individuals who have speech and language disorders.

SPED- 336 Early Childhood Special Education Pre-Student Teaching (2.00 cr.)

Repeatable: No

Supervised experience in teaching children with exceptionalities. Instructional practices based on knowledge of the child, family, community, and the curriculum.

Prerequisite: take SPED-305

SPED- 338 Pre-Student Teaching Children/Youth With Disabilities (2.00 cr.)

Repeatable: No

Supervised experience in observing, planning instruction, and teaching children and youth with disabilities in a cross-categorical school environment.

Benchmark I Completed

SPED- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SPED- 400 Workshop: Topics In Special Education (1.00 - 3.00 cr.)

Repeatable: No

Current specialized topics studied through experiential activities.

SPED- 420 Schools, Families And Community Collaboration (3.00 cr.)

Repeatable: No

Theory, general principles and procedures for fostering collaborative partnerships among families, professionals, students and other service providers. Focuses on families with children who have disabilities.

Benchmark I Completed

SPED- 430 Inclusion of Students With Exceptional Needs (3.00 cr.)

Repeatable: No

Inclusion of students with exceptional educational needs in the regular classroom setting. Laws, definition, characteristics, adaptations, strategies and transitional services that pertain to persons identified with: cognitive disability, learning disability, attention deficit hyperactivity disorder, emotional disability, autism, traumatic brain injury, speech and language disorders, visual and hearing loss, physical and other health impairments, and gifted and talented.

SPED- 440 Diagnosis And Remediation Of Literacy And Math Disabilities (4.00 cr.)

Repeatable: No

Curriculum, methods, assessment and remediation of teaching reading, math, and language to individuals with mild disabilities. Strategies that assess and evaluate, monitor progress, increase, maintain and generalize skills, facilitate integration, and compensate for learning deficits in the general and special education curricula.

Prerequisites: Benchmark I completion, EDUC-380, EDUC-381, and EDUC-382

SPED- 447 Emotional And Behavioral Problems Of Children And Adolescents (3.00 cr.)

Repeatable: No

Assessment, identification and evaluation of emotional and behavioral disorders of learners middle childhood through adolescence, including methods of observing, diagnosing, documenting and interpreting. Characteristics of emotional and behavioral disabled learners, including potential concomitant physical, cognitive, or sensory disabilities and psychological, social and environmental factors contributing to childhood emotional and behavioral disorders.

SPED- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain experience in business, industry, or other. Normally entails recurring, supervised work periods, each one building and expanding on the previous. Department consent

SPED- 462 Classroom Management Techniques (3.00 cr.)

Repeatable: No

Techniques for motivating handicapped youth, individual and group discipline, behavior modification, educational organization, evaluation, and communication to enhance learning.
Benchmark I Completed

SPED- 471 Introduction to Special Education and Professional Portfolio Development (3.00 cr.)

Repeatable: No

Survey of the history of the field, the philosophy of special education, the mission of the field, special education legislation and mandates, issues within the profession, influential organizations, and the basic principles of professional portfolio development.

SPED- 472 Foundations of Autism Spectrum Disorder (3.00 cr.)

Repeatable: No

A foundation for understanding individuals with Autism spectrum Disorders (ASD) and its effect on the individuals' life and learning, through a comprehensive overview of the history, current literature, and best practices.

SPED- 473 Behavioral Interventions and Positive Behavior Supports (3.00 cr.)

Repeatable: No

Study functional behavioral assessment (FBA) and behavioral intervention planning (BIP) for individualized behavior problems for students with Autism Spectrum Disorder and related disabilities in the PK-12 educational setting. Focus on assessment skills to produce data-driven environmental modifications, pro-social replacement behaviors, consequence strategies, and home-school collaboration.

SPED- 474 Augmentative Communication and Social Skills (3.00 cr.)

Repeatable: No

Review current literature in supporting communication and social skills for individuals with Autism Spectrum Disorder; including best practices in assessment and implementation of augmentative and alternative communication interventions.

SPED- 475 Assessment and Methodology of Autism Spectrum Disorder (3.00 cr.)

Repeatable: No

Critical review of assessment methods used in the identification of Autism Spectrum Disorder. Formal and informal assessment results are utilized to create an intervention plan that is responsive to the student's individual needs.

SPED- 476 Practicum in Autism Spectrum Disorder (3.00 cr.)

Repeatable: No

Review of instructional techniques, adaptations, and modifications to develop individualized instruction for students with autism spectrum disorder. Aligning instruction to student learning and behavioral styles and assessment in the general education and special education settings.
Department consent

SPED- 481 Student Teaching: Special Education (4.00 - 16.00 cr.)

Repeatable: Yes

Directed special education teaching and community experience in selected off-campus schools.
Department consent
Prerequisites: take SPED-318, SPED-326, and SPED-462

SPED- 482 Student Teaching Early Childhood-Special Education (4.00 - 8.00 cr.)

Repeatable: No

Directed teaching and community experiences in selected infant-toddler, preschool, or school based programs for children with disabilities.
Prerequisites: take SPED-320 and SPED-430

SPED- 488 Intern Teaching: Special Education (16.00 cr.)

Repeatable: No

An alternative method of obtaining Special Education student teaching experience. Interns receive license to teach and salaried appointment in a cooperating school for one semester.
Department consent
Prerequisites: take SPED-322, SPED=323, SPED-324, SPED-326, and SPED-462

SPED- 489 Intern Teaching Early Childhood: Special Education (8.00 - 16.00 cr.)

Repeatable: Yes

Directed teaching and community experiences in selected infant, toddler, preschool, or primary school-based programs for children with disabilities.
Prerequisite: take SPED-320

SPED- 490 Behavioral Interventions In The Schools (2.00 cr.)

Repeatable: No

Study and practice in Functional Behavioral Assessment and Behavioral Intervention Planning for individualized behavior problems in the PK-12 education setting using both a direct-service and consultation-collaboration model. Focus on assessment skills to produce data-driven environmental modifications, pro-social replacement behaviors, consequence strategies, and home-school

interventions.

Benchmark I Completed

SPED- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

SPSY – School Psychology

SPSY- 490 Behavioral Interventions In The Schools (2.00 cr.)

Repeatable: No

Study and practice in Functional Behavioral Assessment and Behavioral Intervention Planning for individualized behavior problems in the PK-12 education setting using both a direct-service and consultation-collaboration model. Focus on assessment skills to produce data-driven environmental modifications, pro-social replacement behaviors, consequence strategies, and home-school interventions.

SRVM – Service Management

SRVM- 111 Introduction To Global Service Management-HT (3.00 cr.)

Global Perspective

Repeatable: No

Principles of service management with emphasis on trends, career opportunities, and global economic impact of service sectors.

SRVM- 149 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.
Department consent

SRVM- 249 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.
Department consent

SRVM- 349 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.
Department consent

SRVM- 354 Services Marketing Management-Ht (3.00 cr.)

Repeatable: No

Marketing management concepts, issues and terminology unique to the service sector. Strategies used by service marketers will be analyzed and contrasted with other economic sectors. *Prerequisites: take HT-344 or BUMKG-330*

SRVM- 398 Service Management Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Off-campus work and study in an approved position to better understand the challenges and potentials of various careers in the hospitality area.

SRVM- 410 Electronic Service Management-Ht (3.00 cr.)

Repeatable: No

Overview, identification, and evaluation of service management components of electronic commerce relationships within the market/ workplace.

SRVM- 420 International Service Concepts (3.00 cr.)

Global Perspective

Repeatable: No

National and cultural constraints and expectations that impact planning, execution, and evaluation of service quality. Cultural, business, managerial and behavioral foundations supporting success in an international service context.

Prerequisite: take SRVM-111

SRVM- 449 Cooperative Education Experience (1.00 - 6.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industry experience. Generally entails recurring, supervised work periods, each one building and expanding on the previous one.
Department consent

SRVM- 498 Service Management Field Experience-HT (1.00 - 2.00 cr.)

Repeatable: Yes

Off-campus work and study in an approved position to better understand the challenges and potentials of various careers in the hospitality area.

Department consent

Must be Senior level or higher

SRVM- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

STAT – Statistics

STAT- 130 Elementary Statistics (2.00 cr.)

Statistics

Repeatable: No

Concepts and application of probability and statistics: data analysis (graphical displays, numerical summary measures); probability and probability distributions; concepts of statistical inference (estimation and hypothesis testing). Illustrated with output from statistical computing packages. Students may incur incidental expenses for software.

STAT- 320 Statistical Methods (3.00 cr.)

Statistics

Repeatable: No

Methods of describing data: graphical methods, numerical summary measures, exploratory data analysis. Probability, probability distributions, expected value. Sampling distributions. Statistical inference: estimation and hypothesis testing for one-sample and two-sample problems. Regression analysis. Demonstrating with standard statistical software packages. Students may incur incidental expenses for software.

Math Placement or MATH-120

STAT- 330 Probability And Statistics For Engineering And The Sciences (3.00 cr.)

Repeatable: No

Exploratory data analysis; basic probability, probability distributions, mathematical expectation, sampling distributions; basic statistical inference (estimation and hypothesis testing); topics in reliability.

Prerequisite: take MATH-154 or MATH-157

STAT- 331 Probability And Mathematical Statistics I (3.00 cr.)

Repeatable: No

Sample spaces. Probability functions for discrete and continuous sample spaces. Conditional probability and independence. Random variables; probability density and cumulative distribution functions; joint, marginal, and conditional distributions. Expected values, moments, and moment-generating functions. Binomial, hypergeometric, Poisson, normal, and gamma distributions.

Prerequisites: take MATH-154 or MATH-157. Prerequisite or concurrent enrollment in MATH-158

STAT- 332 Probability And Mathematical Statistics II (3.00 cr.)

Repeatable: No

Point estimation. Properties of point estimators: unbiasedness, efficiency, consistency, sufficiency. The method of maximum likelihood. Basic concepts of interval estimation and hypothesis testing. Inference in one-sample and two-sample problems. Simple linear regression analysis; the method of least squares. Goodness-of-fit tests. Analysis of categorical data. *Prerequisite: take STAT-331*

STAT- 440 Advanced Linear Modeling-Regression And Time Series Analysis (3.00 cr.)

Repeatable: No

Multiple regression, inference about regression parameters, remedial regression measures, quantitative and qualitative regression, model selection/validation, nonlinear regression, neural networks, logistic and Poisson regression, generalized linear models, time series, smoothing, stochastic time series, moving average and autoregressive models, auto regressive integrated moving average (ARIMA), estimating and forecasting with time series.

Prerequisite: take STAT-332

STAT- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

STMED – Science, Technology and Mathematics Education

STMED- 101 Introduction to Math and Science Education (2.00 cr.)

Repeatable: No

Overview of math and science education programs, roles and responsibilities of math and science teachers, state and professional standards, history of math and science education, professional resources, curriculum, instruction, assessment, and classroom management.

STMED- 160 Introduction to Technology and Science Education (3.00 cr.)

Repeatable: No

Survey of technology and science teaching, including teachers' responsibilities, curriculum, literature, current issues and organizations associated with the profession and teaching within K-12 schools.

STMED- 185 Pre-Student Teaching (1.00 cr.)

Repeatable: No

Introductory field experience and seminar includes observing, analyzing, and experiencing teaching in a public school setting. Minimum of 50 hours completed.

Prerequisite: Background check required.

STMED- 260 Curriculum Methods & Assessment for Science & Technology (3.00 cr.)

Repeatable: No

Development of rationales, goals, content outlines, outcomes, objectives, activities, and assessment items.

Prerequisite: take STMED-101 or STMED-160

STMED- 360 Pre-Student Teaching In Science Technology and Math Education (1.00 cr.)

Repeatable: No

Observing, analyzing, experiencing, and reflecting on teaching in public school settings for STMED pre-service teachers.

Department consent

Prerequisites: Take STMED-101 or STMED-160, Benchmark 1 must be complete & background check is required.

STMED- 390 Laboratory and Classroom Management in Science and Technology (3.00 cr.)

Repeatable: No

Laboratory and classroom management strategies, conflict resolution, syllabi, paperwork, grading, communication, managing facilities and equipment, purchasing, maintenance, storage, lab and material safety, safety equipment, liability, and negligence.

Benchmark 1 Completed

STMED- 401 Capstone: Math and Science Education (1.00 cr.)

Repeatable: No

Synthesis of material learned in the math and science education program and study of educational research, evidence-based

practice, and professional development.

Prerequisite: Benchmark I completion

STMED- 460 Teaching Methods for Science and Technology Education (3.00 cr.)

Repeatable: No

Development and implementation of lessons, demonstrations, learning activities, and formative assessments. *Prerequisites: Benchmark I completion and STMED-260*

SUST – Sustainability

SUST- 315 Sustainable Engineering (3.00 cr.)

Repeatable: No

Impact of engineering and design/manufacturing decisions on the environment. Topics include sustainability, energy and material flows, risk assessment, multi-use product life cycles, manufacturing process waste streams, sustainable product design issues, end-of-life product handling, and pollution prevention techniques.

Must be Junior level or higher

SUST- 425 Sustainable Design & Development Capstone (3.00 cr.)

Repeatable: No

Application and study of sustainable design and development through the solution of a community-based project. Design of a triple bottom line solution to industrial problems will be emphasized.

Prerequisite: take BIO-350

SUST- 432 Global Sustainability Experience in Design & Manufacturing (3.00 cr.)

Global Perspective

Repeatable: No

Cross-disciplinary exploration of ecologically-friendly design, engineering, manufacturing and business models. International travel component with corporate, cultural, academic and civic leaders. Cultural, economic and political influences; product design; manufacturing; sustainability; application of current eco-friendly product design models; research Topics; regional global visitation; studio and laboratory experiences; project and presentation.

Must be Junior level or higher

SUST- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

SUST- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

TECED – Technology Education

TECED- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

TECED- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

TECED- 299 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

TECED- 325 Technology For Elementary School Children (2.00 cr.)

Repeatable: No

Development, philosophy, objectives and course organization for industrial arts for the elementary schools. Suitable laboratory work in woods, metals, plastics and drawing.

TECED- 330 Implementing Technology Education (3.00 cr.)

Repeatable: No

Converts the theory of contemporary technology education programs into instructional materials, facilities, and strategy suited to the secondary and post-secondary school.

TECED- 333 Planning Technical/Vocational Laboratories (2.00 cr.)

Repeatable: No

School shop facility planning: equipment selection, placement, care and management.

Prerequisite: take TECED-405

TECED- 340 Middle School Technology Education (2.00 cr.)

Repeatable: No

Reviews trends and activities in the technology education movement. teach middle school offerings.

TECED- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

TECED- 370 Project Lead the Way: Gateway to Technology Seminar (1.00 cr.)

Repeatable: No

Overview of Project Lead the Way: Gateway to Technology. Advanced curriculum, procedures for using curricula, end-of-course assessment procedures, verification of training, and online resources.

Prerequisites: take STMED-160 and TECED-340. Background check required.

TECED- 371 Project Lead the Way: Intro to Engineering Design Seminar (1.00 cr.)

Repeatable: No

Overview of Project Lead the Way: Introduction to Engineering Design Seminar. Curriculum, procedures for using curricula, end-of-course assessment procedures, verification of training, and online resources.

Prerequisites: STMED-160, TECED-340, MFGT-110, and either INMGT-314 or RD-420

TECED- 372 Project Lead the Way - Principles of Engineering (1.00 cr.)

Repeatable: No

Overview of Project Lead the Way: Principles of Engineering. Curriculum, procedures for using curricula, end-of-course assessment procedures, verification of training, and online resources. *Prerequisites: take MFGT-110, RD-205, ELEC-204 and either POWER-396 or ELEC-341. Background check required.*

TECED- 375 Workshop: (1.00 - 3.00 cr.)

Repeatable: No

Current specialized topics in industrial education through experiential activities.

Instructor's consent

TECED- 398 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

TECED- 398E Field Experience (1.00 cr.)

Repeatable: No

Department consent

TECED- 406 Evaluation In Technology/Vocational Education (2.00 cr.)

Repeatable: No

For industrial arts and vocational/technical teachers in evaluating program and student performance: basis for student assessment, evaluation of manipulative activity and construction of teacher-made tests as applied to all students (including those with special needs). Student evaluation of instructor and instruction.

Prerequisite: take TECED-205

TECED- 408 Student Teaching Technology/Vocational Education (8.00 cr.)

Repeatable: No

Directed teaching and community experiences in selected off-campus schools.

Department consent

Cum GPA 2.25 or higher

TECED- 409 Student Teaching in Technology Education (4.00 - 16.00 cr.)

Repeatable: No

Directed teaching and community experiences in selected off-campus schools.

Department consent

Prerequisite: Benchmark II completion

TECED- 431 Field Trips To Industry (1.00 - 3.00 cr.)

Repeatable: Yes

Opportunities are provided for industrial and vocational education majors as well as teachers to accumulate information about industries through local and distant on-site visits to industries. A third credit may be earned by showing evidence of application of data collected in courses being taught.

Department consent

TECED- 437 Organization/Management Of Technical Laboratories (2.00 cr.)

Repeatable: No

Experience in administration, project development and teaching problems associated with industrial education.

Prerequisite: take TECED-205

TECED- 438 Course Construction (2.00 cr.)

Repeatable: No

Directed experience in curriculum development and course of study construction for industrial education teachers; development of behavioral objectives and of instructional materials to help reach these objectives; development of course of study, instructional package/unit of instruction.

TECED- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

TECED- 470 Project Lead the Way - Digital Electronics Seminar (1.00 cr.)

Repeatable: No

Overview of Project Lead the Way distance education curriculum, procedures for using curricula, end-of-course assessment procedures, verification of training, and online resources.

Prerequisites: Take ELEC-204 and ELEC-271 and either POWER-396 or ELEC-341. Background check required.

TECED- 488 Internship Teaching (2.00 - 8.00 cr.)

Repeatable: No

An alternate method of obtaining student teaching experience.

Teacher interns receive a license to teach and salaried appointments in cooperating school systems for one full semester.

Department consent

TECED- 489 Internship Teaching (16.00 cr.)

Repeatable: Yes

An alternate method of obtaining student teaching experience.

Teacher interns receive a license to teach and salaried appointments in cooperating school systems for one full semester.

Department consent

TECED- 498 Field Experience (1.00 - 2.00 cr.)

Repeatable: No

Department consent

TECED- 498E Field Experience (1.00 cr.)

Repeatable: No

Department consent

TECED- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

TECH – Technology**TECH- 230 Technology Dynamics** (3.00 cr.)***Technology***

Repeatable: No

Examine the process of technological change. Study the transfer of technological invention and innovation. Develop a framework for forecasting.

TECH- 295 Honors Seminar In Technology (2.00 cr.)***Technology***

Repeatable: No

Addresses a wide range of technological concepts along with examples of how technology impacts our lives as individuals, a society, and a global community. Delivered in seminar format.

TECH- 340 Future Of Work (1.00 - 2.00 cr.)

Repeatable: No

Future possibilities as to why people work, who will work, and in what conditions. Project probable work parameters from current trends. Relate past, present, and future to students' individual work situations.

TECH- 375 Workshop (1.00 - 3.00 cr.)

Repeatable: Yes

Special topics providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

TECH- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

THEA – Theatre**THEA- 131 Theater Practicum** (1.00 cr.)***Performing Arts***

Repeatable: Yes

Participation in acting, stagecraft, lights, sound, makeup, costumes, properties and business in university theater productions.

THEA- 200 Stagecraft (3.00 cr.)***Creative Arts***

Repeatable: No

Theatre backstage theory and techniques creating scenery and lighting for theatrical productions. Use of tools and technology in creating technical elements.

THEA- 232 Introduction To The Theater (3.00 cr.)***Performing Arts***

Repeatable: No

Development of theater arts from ancient times to present; play styles, production methods and audience appreciation; representative plays.

THEA- 300 Special Topics in Theatre (3.00 cr.)

Repeatable: Yes

Current issues or historical topics related to theatre. Specific topics advertised prior to the semester offered. Repeatable up to three times with different topics or issues.

THEA- 334 Contemporary Theater (2.00 cr.)***Performing Arts***

Repeatable: No

Analysis of selected plays; structure, dramatic content and production methods.

THEA- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

TRANS – Transportation**TRANS- 149 Cooperative Education Experience** (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

TRANS- 202 Transportation Systems (2.00 cr.)***Technology***

Repeatable: No

Effects of transportation on society. Comparisons of transportation modes on relative costs, speeds, reliability, efficiency, and more. Examination of vehicle structures, propulsion, suspension, guidance, control and support systems.

TRANS- 203 Transportation Systems Lab (1.00 cr.)

Repeatable: No

Applications and reinforcement of transportation modes. Special projects and field trips.

TRANS- 204 Energy Technology (2.00 cr.)

Technology

Repeatable: No

The nature of energy, its discovery, conversion, and harnessing. Economic, environmental, political and social ramifications of energy-related choices.

TRANS- 205 Energy Technology Lab (1.00 cr.)

Repeatable: No

Mechanical, electrical, fluid and thermal power projects.

Prerequisite: take TRANS-204

TRANS- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

TRANS- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

TRANS- 395 Seminar (1.00 - 2.00 cr.)

Repeatable: Yes

Specific content is designed to upgrade competencies of participants. Content will change to reflect current state of the art in electricity/electronics or power mechanics.

TRANS- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved position to gain business/industrial/other experience. Normally entails recurring, supervised work periods, each one building and expanding on the previous.

Department consent

TRANS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

TRDIS – Transdisciplinary

TRDIS- 101 Seminar In Career Exploration (1.00 cr.)

Repeatable: No

Identification and analysis of individual career interests, values, needs, skills, and goals. Investigation of resources for career planning and development, including educational programs, job market information and employment opportunities. Development of individual career plans.

TRDIS- 120 Strategies For Academic Success (2.00 - 3.00 cr.)

Repeatable: No

Develop study skills strategies, note taking and test taking techniques, time management, goal setting, and textbook reading comprehension. Application of principles leads to academic success at the university.

TRDIS- 200 Short-Term Cultural Experience (1.00 cr.)

Repeatable: No

Short-term travel experience to U.S. regions delivered through Student Support Services grant-funded program. Available to active, participating students.

Instructor's consent

Must be Sophomore level or higher

TRDIS- 210 Technology, Fab Lab, and Society (3.00 cr.)

Contemporary Issues

Repeatable: No

Historical, social, political and technological survey of design and prototyping in context of digital fabrication spaces.

TRDIS- 220 Insights into Innovation and Ideation (3.00 cr.)

Social Responsibility and Ethical Reasoning

Repeatable: No

Develop insights into product/service/idea invention, innovation, and ethical economic and social value creation.

TRDIS- 296A Experience China: Society and Cultural Immersion (3.00 cr.)

Foreign Language and Culture, Social and Behavioral Sciences - Sociology

Repeatable: No

Intercultural communication and exposure, awareness and understanding of China, Chinese daily life and culture, and global citizenship. Assess and develop cultural understanding, assumptions, and adaptation.

Department consent

TRDIS- 297 Wisconsin In Scotland Field Experience (3.00 cr.)

Repeatable: No

International field experience as unpaid volunteer in a business, educational, social service, or other non-profit organization in Scotland. Must be enrolled in Wisconsin in Scotland study abroad program.

TRDIS- 320 McNair Scholars Program Seminar I: Junior Introduction (2.00 cr.)

Repeatable: No

Introduction of McNair Scholars to the program. Preparation and planning for doctoral study in an academic discipline.

TRDIS- 325 McNair Scholars Program Seminar II: Junior Research Proposal (2.00 cr.)

Repeatable: No

Research proposal and preparation for summer research institute for McNair Scholars.

TRDIS- 330 McNair Scholars Program Seminar III: Senior Graduate School Preparation (2.00 cr.)

Repeatable: No

Preparation for the GRE and the graduate school application process for McNair Scholars.

TRDIS- 335 McNair Scholars Program Seminar IV: Senior Capstone (2.00 cr.)

Repeatable: No

Transition to graduate school for McNair Scholars. Research dissemination and graduate school success strategies.

TRDIS- 350 Applied Foreign Language Project (2.00 cr.)

Global Perspective

Repeatable: No

Application of foreign language to the context of a career related to the student's major program. Vocabulary, written communications, and oral interaction in the primary language of the Applied Foreign Language minor.

Prerequisite: 16 credits in a foreign language

TRDIS- 477 International Study (1.00 - 16.00 cr.)

Global Perspective

Repeatable: Yes

Inter-institutional credit exchange for students accepted in university-approved study abroad or international exchange programs offered through the office of international programs at recognized/accredited institutions in other countries. The course may be repeated.

TRHRD – Training and Human Resource Development

TRHRD- 149 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved training department in business, industry, or government. May be recurring, is supervised during work/study periods. Any recurring work/study periods would be designed to build upon previous experiences in the course.

Department consent

TRHRD- 249 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved training department in business, industry, or government. May be recurring, is supervised during work/study periods. Any recurring work/study periods would be designed to build upon previous experiences in the course.

Department consent

TRHRD- 349 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved training department in business, industry, or government. May be recurring, is supervised during work/study periods. Any recurring work/study periods would be designed to build upon previous experiences in the course.

Department consent

TRHRD- 360 Training Systems in Business and Industry (3.00 cr.)

Repeatable: No

Types and purpose of training as related to business and industry. Training analysis, content, delivery systems, evaluation and justification for training. Designed for non- education majors.

TRHRD- 370 Training Methods In Business And Industry (2.00 cr.)

Repeatable: No

Identification of training situations where the development and delivery of training is needed. Emphasis is on methods to deliver a training session. Students will be required to make training sessions presentations.

TRHRD- 375 Workshop (1.00 - 3.00 cr.)

Repeatable: Yes

Special topics providing hands-on or experiential learning activities. Specific content and title to reflect the topic of the workshop.

TRHRD- 389 Training Internship (1.00 - 8.00 cr.)

Repeatable: Yes

Opportunities for students to learn and practice training management and instructional techniques through activities and experiences in a training department. Objectives commensurate with student's background and field of training. Activities include designing and implementing training programs in student's major or minor field of study in either industry, business, military or government training programs.

Department consent

TRHRD-360

TRHRD- 399 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

TRHRD- 400 Workshop (1.00 - 3.00 cr.)

Repeatable: Yes

Special topics in training and human resource development providing hands-on or experiential learning activities. Specific content and title to reflect topic of the workshop.

TRHRD- 449 Cooperative Education Experience (1.00 - 8.00 cr.)

Repeatable: Yes

Work and study in an approved training department in business, industry, or government. May be recurring, is supervised during work/study periods. Any recurring work/study periods would be designed to build upon previous experiences in the course.

Department consent

TRHRD- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

WGS – Women and Gender Studies

WGS- 199 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent

WGS- 210 Introduction to Women and Gender Studies (3.00 cr.)

Contemporary Issues, Racial & Ethnic Studies Category A, Global Perspective

Repeatable: No

Interdisciplinary analysis of gender and discrimination, including an examination of history, science, art, and institutions throughout the U.S. and globally.

WGS- 311 topics In Women's Studies (1.00 - 3.00 cr.)

Repeatable: Yes

Exploring, from interdisciplinary perspective, new information and ideas in a selected area of significance to women's studies.

Prerequisite: take WGS-210

WGS- 356 Gender in Cross Cultural Perspective (3.00 cr.)

Global Perspective, Social Responsibility and Ethical Reasoning

Repeatable: No

Gender roles in cross-cultural perspective, including the United States. Anthropological theories of gender and inequality. Variation in domestic, social, economic, political, and religious roles; historical development of and contemporary changes in women's and men's roles; global influences and processes of change and improvement in the lives of modern women.

WGS- 499 Independent Study (1.00 - 3.00 cr.)

Repeatable: Yes

Department consent